

RF

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Camera Hub G3

ISSUED TO
Konec Solutions Pty Ltd

Level 3, 5 Talavera Rd, Macquarie Park NSW 2113 Australia



Tested by:	Zhang Zhenwu	Report No.:	BL-SZ21C0720-604
		EUT Name:	Camera Hub G3
Date	Jan. 25, 2022	Model Name:	CH-H03
		Brand Name:	Aqara
		Test Standard:	AS/NZS 4268:2017 (refer section 3)
Approved by:	Jin Lin	Test Conclusion:	Pass
	Liao Jianming (Technical Director)	Test Date:	Jan. 06, 2022 ~ Jan. 18, 2022
Date	Jan. 25, 2022	Date of Issue:	Jan. 25, 2022

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jan. 25, 2022</u>	<u>Initial Issue</u>

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province,P. R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province,P. R. China
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v1.1.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Konec Solutions Pty Ltd
Address	Level 3, 5 Talavera Rd, Macquarie Park NSW 2113 Australia

2.2 Manufacturer Information

Manufacturer	Lumi United Technology Co., Ltd.
Address	8th Floor, JinQi Wisdom Valley, No.1 Tangling Road, Liuxian Ave, Taoyuan Residential District, Nanshan District, Shenzhen, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Camera Hub G3
Model Name Under Test	CH-H03
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V1.0.1
Software Version	V1.0.1
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Technical Information

General technical information:

Network and Wireless connectivity	WIFI 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac Band 1/2/3, 5.8G SRD, ZigBee
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The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	802.11a/n/ac: 5.725 GHz – 5.875 GHz
Modulation technology	OFDM
Modulation Type	802.11a/ n: 64QAM, 16QAM, BPSK, QPSK 802.11ac: 256QAM, 64QAM, 16QAM, BPSK, QPSK
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to VHT-MCS9
Antenna Type	Steel Disc Antenna
Antenna Gain	2.0 dBi (In test items related to antenna gain, the final results reflect this figure. This value is provided by the applicant.)
The Max RF Output power	13.9 dBm
Receiver categories	1 (see section 4.4)

5 channels are provided for 802.11a/n/ac (20MHz):

Channel	Center Frequency(MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

2 channels are provided for 802.11n/ac (40 MHz):

Channel	Center Frequency(MHz)
151	5755
159	5795

1 channels are provided for 802.11ac (80 MHz):

Channel	Center Frequency(MHz)
155	5775

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Technology	Modulation Type	Channel
Equivalent isotropically radiated power	11a	6	OFDM	BPSK	165/157/149
	11n(20 MHz)	6.5	OFDM	BPSK	165/157/149
	11n(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(20 MHz)	6.5	OFDM	BPSK	165/157/149
	11ac(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(80 MHz)	29.3	OFDM	BPSK	155
Permitted range of operation frequencies	11a	6	OFDM	BPSK	165/149
	11n(20 MHz)	6.5	OFDM	BPSK	165/149
	11n(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(20 MHz)	6.5	OFDM	BPSK	165/149
	11ac(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(80 MHz)	29.3	OFDM	BPSK	155
Unwanted emissions in the spurious domain	11a	6	OFDM	BPSK	165/149
	11n(20 MHz)	6.5	OFDM	BPSK	165/149
	11n(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(20 MHz)	6.5	OFDM	BPSK	165/149
	11ac(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(80 MHz)	29.3	OFDM	BPSK	155
Receiver Spurious emissions	11a	6	OFDM	BPSK	165/149
	11n(20 MHz)	6.5	OFDM	BPSK	165/149
	11n(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(20 MHz)	6.5	OFDM	BPSK	165/149
	11ac(40 MHz)	13.5	OFDM	BPSK	159/151
	11ac(80 MHz)	29.3	OFDM	BPSK	155

Mode	5.725 GHz – 5.875 GHz		
	Channel	Channel Number	Frequency (MHz)
11a	HIGH/MIDDLE/LOW(H/M/L)	165/157/149	5825/5785/5745
11n(20 MHz)	HIGH/MIDDLE/LOW(H/M/L)	165/157/149	5825/5785/5745
11n(40 MHz)	HIGH/LOW(H/L)	159/151	5795/5755
11ac(20 MHz)	HIGH/MIDDLE/LOW(H/M/L)	165/157/149	5825/5785/5745
11ac(40 MHz)	HIGH/LOW(H/L)	159/151	5795/5755
11ac(80 MHz)	MIDDLE(M)	155	5775

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	AS/NZS 4268:2017	Radio equipment and systems - Short range devices - Limits and methods of measurement
2	ETSI EN 300 440 V2.2.1 (2018-07)	Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonised Standard for access to radio spectrum.

3.2 Verdict

Report Section	Standard Rule	Description	Test Result	Verdict	Remark
Transmitter requirements					
5.1.1	4.2.2	Equivalent isotropically radiated power	ANNEX A.1	Pass	--
5.1.2	4.2.3	Permitted range of operation frequencies	ANNEX A.2	Pass	--
5.1.3	4.2.4	Unwanted emissions in the spurious domain	ANNEX A.3	Pass	--
5.1.4	4.2.5	Duty cycle	--	N/A	Note ¹
5.1.5	4.2.6	Additional requirements for FHSS equipment	--	N/A	Note ²
Receiver requirements					
5.2.1	4.3.3	Adjacent channel selectivity	ANNEX A.6	Pass	Note ³
5.2.2	4.3.4	Blocking or desensitization	ANNEX A.4	Pass	Note ⁴
5.2.3	4.3.5	Spurious emissions	ANNEX A.5	Pass	--

Note ¹: This clause is applicable for transmitting devices which do not use LBT, DAA, or RFID transmitters operating in the 2446 to 2454 MHz band transmitting more than 500 mW e.i.r.p. power level.

Note ²: The requirements in this clause apply only to equipment using FHSS modulation.

Note ³: This clause is applicable if the equipment receiver category 1 has been selected.

Note ⁴: This clause is applicable for all receiver category equipment.

3.3 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameters	Uncertainty
RF power, conducted	0.66 dB
All emissions, radiated	5.36 dB
Unwanted Emissions, conducted	1.78 dB
Temperature	0.82°C
Voltage (DC)	1%
Humidity	4.1%

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

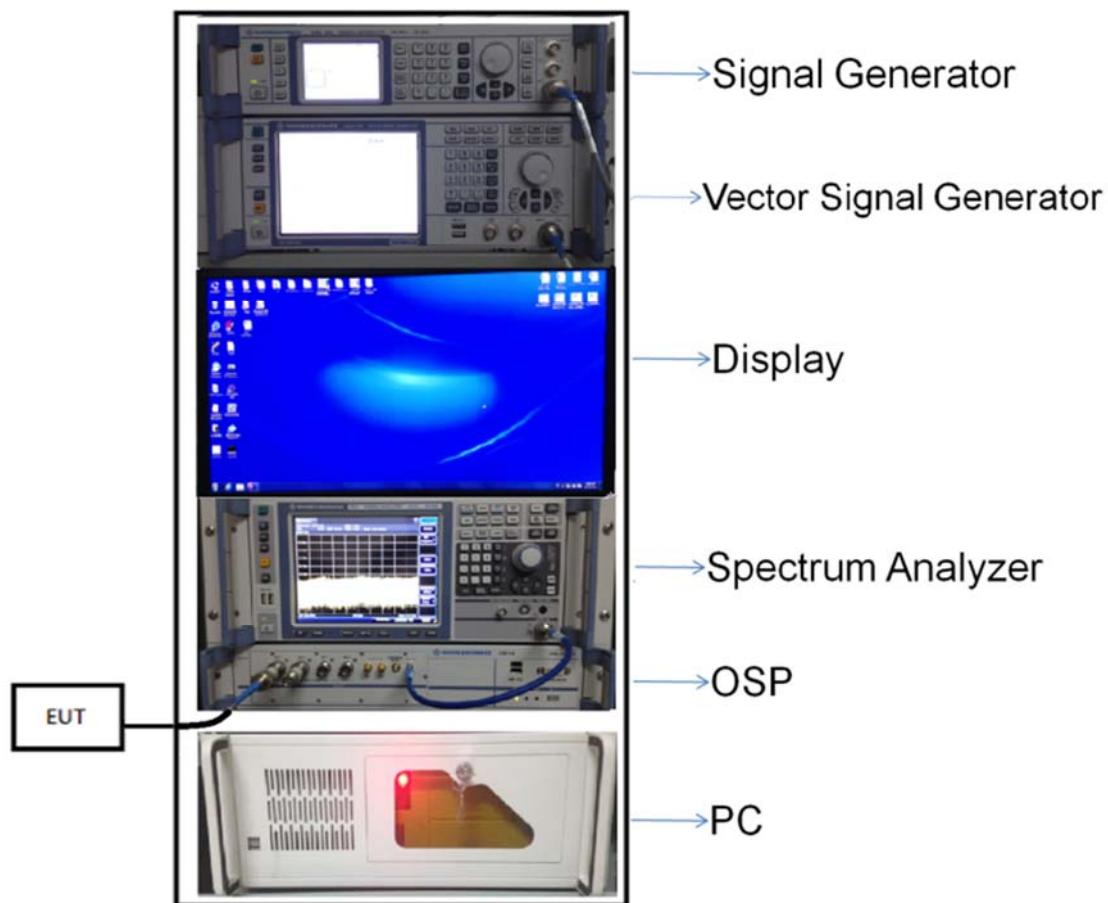
Relative Humidity	45% to 55%		
Atmospheric Pressure	100 kPa to 102 kPa		
Temperature	NT (Normal Temperature)	+22°C to +25°C	
	LT (Low Temperature)	-10°C	
	HT (High Temperature)	+40°C	
Working Voltage of the EUT	NV (Normal Voltage)	5.0 V	
	LV (Low Voltage)	4.5 V	
	HV (High Voltage)	5.5 V	

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2021.08.09	2022.08.08
Spectrum Analyzer	KEYSIGHT	N9020A	MY56060183	2021.09.08	2022.09.07
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	260592	2021.01.27	2022.01.26
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2021.08.24	2022.08.23
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2021.06.01	2022.05.31
Bluetooth Signaling Unit	ROHDE&SCHWARZ	CMW270	100607	2021.06.01	2022.05.31
Bluetooth Signaling Unit	ROHDE&SCHWARZ	CMW500	142028	2021.06.01	2022.05.31
DC Power Supply	ITECH	IT6720	60010301071 7610007	2021.09.22	2022.09.21
Temperature Chamber	AHK	NTH64-40A	1310	2022.01.05	2023.01.04
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2021.09.13	2022.09.12
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2021.04.16	2024.04.15
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2021.08.20	2024.08.19
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2022.07.01
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	2021.07.02	2024.07.01
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2021.09.04	2024.09.03

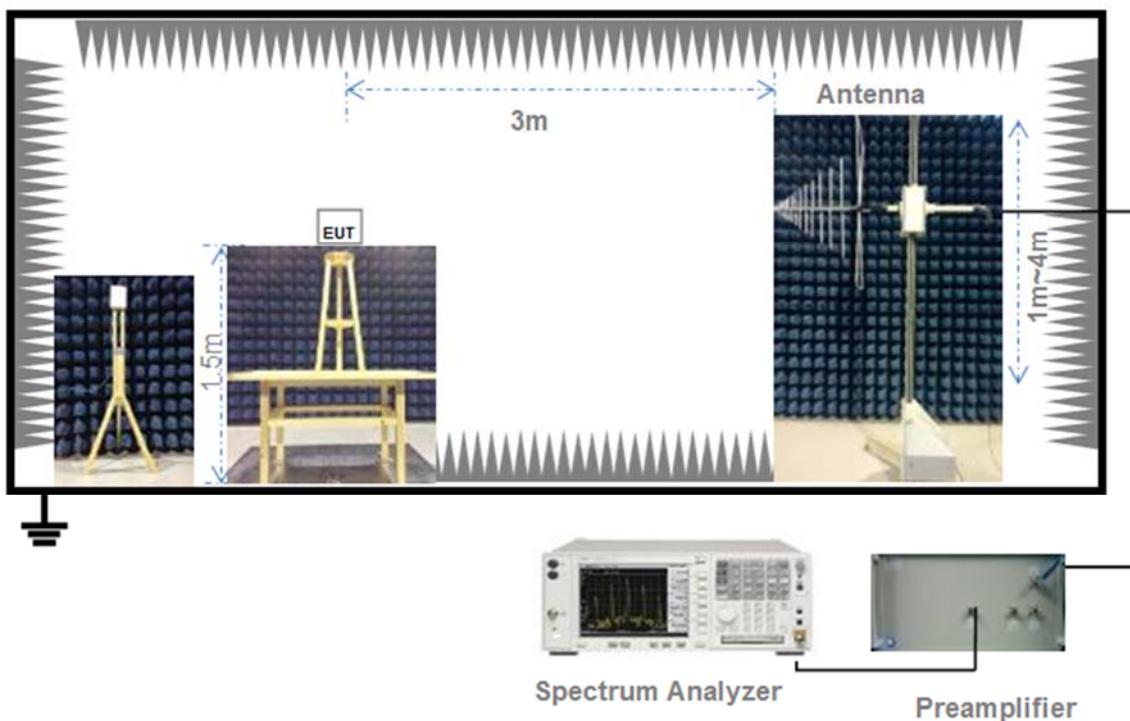
4.3 Description of Test Setup

4.3.1 For Antenna Port Test

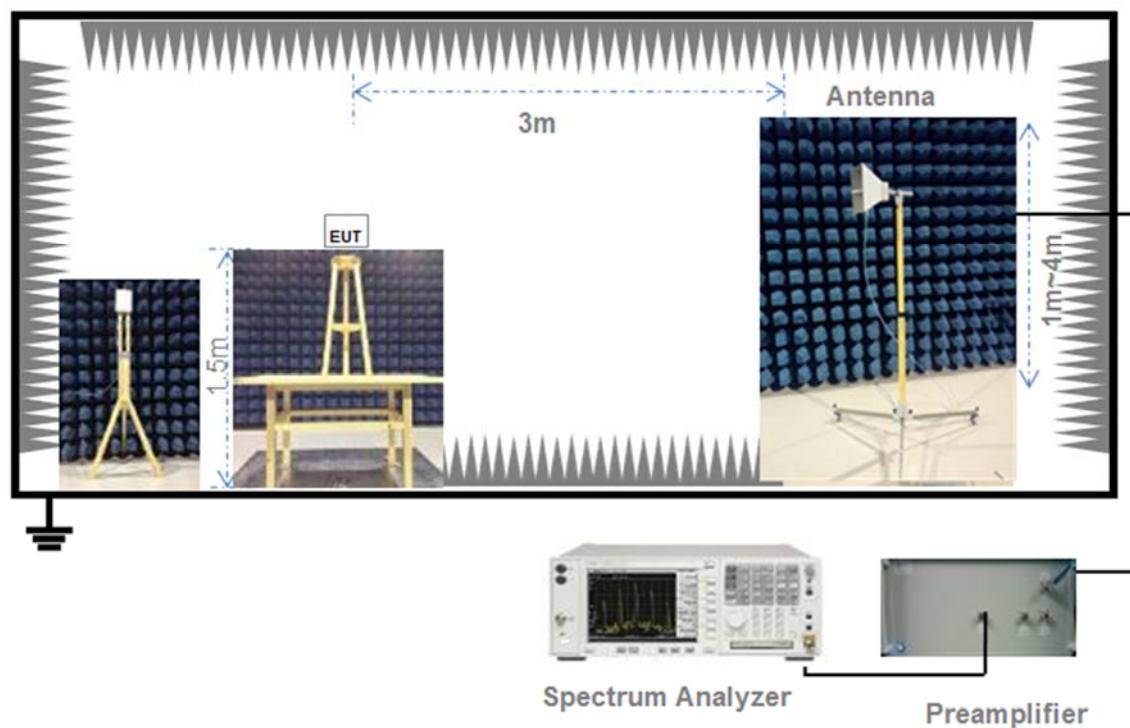


(Diagram 1)

4.3.2 For Radiated Test

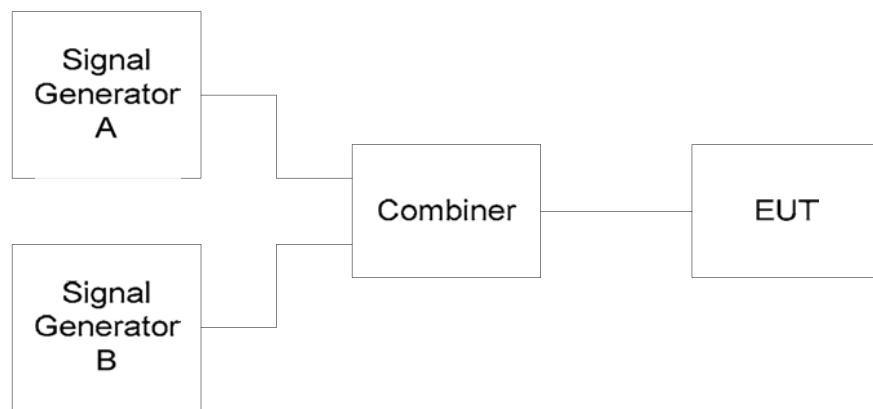


(Diagram 2)



(Diagram 3)

4.3.3 Blocking or desensitization



(Diagram 5)

4.4 Receiver categorization

Receiver categories	Relevant receiver clauses	Risk assessment of receiver performance
1	4.3.3, 4.3.4 and 4.3.5	Highly reliable SRD communication media; e.g. serving human life inherent systems (may result in a physical risk to a person).
2	4.3.4 and 4.3.5	Medium reliable SRD communication media e.g. causing inconvenience to persons, which cannot simply be overcome by other means.
3	4.3.4 and 4.3.5	Standard reliable SRD communication media e.g. Inconvenience to persons, which can simply be overcome by other means (e.g. manual).
Note: If receiver category 1 or 2 is selected, this shall be stated in both the test report and in the user's manual for the equipment.		

4.5 Measuring receiver

Frequency	Detector type	Measurement receiver bandwidth	Spectrum analyzer bandwidth
9 kHz ≤ f < 150 kHz	Quasi Peak	200 Hz	300 Hz
150 kHz ≤ f < 30 MHz	Quasi Peak	9 kHz	10 kHz
30 MHz ≤ f < 1 GHz	Quasi Peak	120 kHz	100 kHz
Note: For the measurement of the ranges 6,765 MHz ≤ f < 6,795 MHz and 13,553 MHz ≤ f < 13,567 MHz, the measurement bandwidth has to be 200 Hz respectively 300 Hz.			

5 Test Type and Test Results

5.1 Transmitter Parameters

5.1.1 Equivalent isotropically radiated power

5.1.1.1 Limit

The transmitter maximum e.i.r.p. under normal and extreme test conditions shall not exceed the values given in table.

Frequency Bands	Maximum radiated peak power (e.i.r.p.)	Application
5725 MHz to 5875 MHz	25 mW e.i.r.p.	Non-specific short range devices

5.1.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.1.3 Test Procedure

The EUT was placed into the temperature oven. The EUT antenna connects has to be connected with power meter. The power source of the EUT has to be connected with the power supply for voltage change and follow next step:

1. Run a test program to control EUT transmit at specific channel
2. A power meter was used to read the response of the power sensor.
3. Record the power level.
4. EIRP = antenna gain + power level of step 3.

5.1.1.4 Test Result

Please refer to ANNEX A.1.

5.1.2 Permitted range of operating frequencies

5.1.2.1 Limit

The width of the power spectrum envelope is $f_H - f_L$ for a given operating frequency. In equipment that allows adjustment or selection of different operating frequencies, the power envelope takes up different positions in the allowed band. The frequency range is determined by the lowest value of f_L and the highest value of f_H resulting from the adjustment of the equipment to the lowest and highest operating frequencies.

The occupied bandwidth (i.e. the bandwidth in which 99 % of the wanted emission is contained) and the necessary bandwidth of the transmitter shall fall within the assigned frequency band.

For all equipment the frequency range shall lie within the frequency band given by clause 4.2.2.4, table 2. For non-harmonized frequency bands the available frequency range may differ between national administrations.

Condition	Limit
Under all test conditions	5725 MHz to 5875 MHz

5.1.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.2.3 Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer.

Added [x] dBi of antenna gain was on the spectrum analyzer.

Place the spectrum analyzer in detector averaging mode with a minimum of 50 sweeps selected and activate transmitter with modulation applied.

Select lowest operating frequency of the equipment under test.

Find lowest frequency below the operating frequency at which spectral power density drops below -75 dBm/Hz e.i.r.p. (-30 dBm if measured in a 30 kHz bandwidth). This frequency shall be recorded (f_L).

Select the highest operating frequency of the equipment under test.

Find the highest frequency at which the spectral power density drops below -75 dBm/Hz e.i.r.p. (-30 dBm if measured in a 30 kHz bandwidth). This frequency shall be recorded (f_H).

These measurements shall also be performed at normal and extreme test conditions.

5.1.2.4 Test Result

Please refer to ANNEX A.2.

5.1.3 Unwanted emissions in the spurious domain

5.1.3.1 Limit

The power of any radiated emission shall not exceed the values as below.

State	47 MHz to 74 MHz 87.5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequency between ≤ 1000 MHz	Frequency >1000 MHz
Operating	4 nW e.r.p	250 nW e.r.p	1 μ W
Standby	2 nW e.r.p	2 nW e.r.p	20nW

Note: The test limit has been transformed to the limit at 3m.

5.1.3.2 Test Setup

The section 4.4.2 (Diagram 2, 3) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3.3 Test Procedure

The EUT was placed on the top of the turntable in open test site area.

The test shall be made in the receiving mode. The turntable was rotated by 360 degrees to determine the position of the highest radiation. The broad band bi-log receiving antenna was placed 3 meters far away from the turntable.

The broadband receiving antenna was fixed on the same height with the EUT to find each suspected emissions of both horizontal and vertical polarization. Each recorded suspected value is indicated as Read Level (Raw).

Replace the EUT by standard antenna and feed the RF port by signal generator.

Adjust the frequency of the signal generator to the suspected emission and slightly rotate the turntable to locate the position with maximum reading.

Adjust the power level of the signal generator to reach the same reading with Read Level (Raw).

The level of the spurious emission is the power level of (7) plus the gain of the standard antenna in dBi and minus the loss of the cable used between the signal generator and the standard antenna.

The measurement shall be repeated at the lowest and the highest channel of the stated frequency range.

5.1.3.4 Test Result

Please refer to ANNEX A.3.

5.1.4 Duty cycle

5.1.4.1 Limit

The next Table defines the maximum duty cycle within a 1 hour period.

For devices with a 100 % duty cycle transmitting an unmodulated carrier most of the time, a time-out shut-off facility shall be implemented in order to improve the efficient use of spectrum. The method of implementation shall be declared by the manufacturer.

Frequency Band	Duty cycle	Application	Notes
2 400 MHz to 2 483,5 MHz	No Restriction	Generic use	-
2 400 MHz to 2 483,5 MHz	No Restriction	Detection, movement and alert applications	-
(a) 2 446 MHz to 2 454 MHz	No Restriction	RFID	Limits shown in annex D shall apply
(b) 2 446 MHz to 2 454 MHz	$\leq 15\%$	RFID	Limits shown in annex D shall apply
5 725 MHz to 5 875 MHz	No Restriction	Generic use	-

Table: Duty cycle limits

5.1.4.2 Test Setup

The section 4.3.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.4.3 Test Procedure

Reference to ETSI EN 300 440 V2.2.1 clause 4.2.5.3.

5.1.4.4 Test Result

Note: Not applicable.

5.1.5 Additional requirements for FHSS equipment

5.1.5.1 Limit

The requirements in this clause apply only to equipment using FHSS modulation.

FHSS modulation shall make use of at least 20 channels hopping over > 90 % of the assigned frequency band.

The dwell time per channel shall not exceed 1 s. While the equipment is operating (transmitting and/or receiving) each channel of the hopping sequence shall be occupied at least once during a period not exceeding four times the product of the dwell time per hop and the number of channels.

5.1.5.2 Test Setup

The section 4.3.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.5.3 Test Procedure

Reference to ETSI EN 300 440 V2.2.1 clause 4.2.6.3.

5.1.5.4 Test Result

Note: Not applicable.

5.2 Receiver Parameters

5.2.1 Adjacent channel selectivity

5.2.1.1 Limit

This requirement applies to Equipment Category 1 receivers.

The adjacent channel selectivity of the equipment under specified conditions shall not be less than -30 dBm + k.

The correction factor, k, is as follows:

$$k = -20\log f - 10\log BW$$

Where:

- f is the frequency in GHz;
- BW is the channel bandwidth in MHz.

The factor k is limited within the following:

- $-40\text{dB} < k < 0 \text{ dB}$

The measured blocking level shall be stated in the test report.

5.2.1.2 Test Setup

See 4.3.1 (Diagram 1) for test setup description for the radiated test. The photo of test setup please refer to ANNEX B.

5.2.1.3 Test Procedure

Reference to ETSI EN 300 440 V2.2.1 clause 4.3.3.3.

5.2.1.4 Test Result

Please refer to ANNEX A.6.

5.2.2 Blocking or desensitization

5.2.2.1 Limit

This requirement applies to all Category 1, 2, and 3 SRD communication media receivers.

The blocking level, for any frequency within the specified ranges, shall not be less than the values given in following table, except at frequencies on which spurious responses are found.

Receiver category	Limit
1	-30 dBm + k
2	-45 dBm + k
3	-60 dBm + k

The correction factor, k, is as follows:

$$k = -20\log f - 10\log BW$$

Where:

- f is the frequency in GHz;
- BW is the channel bandwidth in MHz.

The factor k is limited within the following:

- $40\text{dB} < k < 0 \text{ dB}$

The measured blocking level shall be stated in the test report.

5.2.2.2 Test Setup

See 4.3.1 (Diagram 1) for test setup description for the radiated test. The photo of test setup please refer to ANNEX B.

5.2.2.3 Test Procedure

Reference to ETSI EN 300 440 V2.2.1 clause 4.3.4.3.

5.2.2.4 Test Result

Please refer to ANNEX A.4.

5.2.3 Receiver Spurious Emissions

5.2.3.1 Limit

The spurious emissions of the transmitter shall not exceed the values in following tables for the EUT in this report.

Frequency $25 \text{ MHz} \leq f < 1 \text{ GHz}$	Frequency above 1 GHz
2nW	20nW

Note: The test limit has been transformed to the limit at 3m.

5.2.3.2 Test Setup

See 4.4.2 (Diagram 2, 3) for test setup description for the radiated test. The photo of test setup please refer to ANNEX B.

5.2.3.3 Test Procedure

The EUT was placed on the top of the turntable in open test site area.

The test shall be made in the receiving mode. The turntable was rotated by 360 degrees to determine the position of the highest radiation. The broad band bi-log receiving antenna was placed 3 meters far away from the turntable.

The broadband receiving antenna was fixed on the same height with the EUT to find each suspected emissions of both horizontal and vertical polarization. Each recorded suspected value is indicated as Read Level (Raw).

Replace the EUT by standard antenna and feed the RF port by signal generator.

Adjust the frequency of the signal generator to the suspected emission and slightly rotate the turntable to locate the position with maximum reading.

Adjust the power level of the signal generator to reach the same reading with Read Level (Raw).

The level of the spurious emission is the power level of (7) plus the gain of the standard antenna in dBi and minus the loss of the cable used between the signal generator and the standard antenna.

The measurement shall be repeated at the lowest and the highest channel of the stated frequency range.

5.2.3.4 Test Result

Please refer to ANNEX A.5.

ANNEX A TEST RESULT

A.1 Equivalent isotropically radiated power

Test Data

Note ¹: P = A + G + 10 log (1/x), where P is EIRP (dBm); A is measured output power; x is duty cycle

Modulation	Test Conditions		EIRP (dBm)			Limit (dBm)	Verdict
	Temperature	Voltage	Low Channel	Middle Channel	High Channel		
11a	LT	NV	13.4	13.7	13.8	14	Pass
		LV	13.2	13.5	13.6	14	Pass
		HV	13.4	13.6	13.6	14	Pass
	HT	LV	13.5	13.6	13.7	14	Pass
		HV	13.3	13.7	13.5	14	Pass

Modulation	Test Conditions		EIRP (dBm)			Limit (dBm)	Verdict
	Temperature	Voltage	Low Channel	Middle Channel	High Channel		
11n(20MHz)	LT	NV	13.7	13.8	13.8	14	Pass
		LV	13.8	13.6	13.7	14	Pass
		HV	13.9	13.9	13.5	14	Pass
	HT	LV	13.8	13.9	13.6	14	Pass
		HV	13.8	13.8	13.9	14	Pass

Modulation	Test Conditions		EIRP (dBm)			Limit (dBm)	Verdict
	Temperature	Voltage	Low Channel	Middle Channel	High Channel		
11n(40MHz)	LT	NV	13.8		13.8	14	Pass
		LV	13.7		13.8	14	Pass
		HV	13.5		13.8	14	Pass
	HT	LV	13.6		13.8	14	Pass
		HV	13.6		13.6	14	Pass

Modulation	Test Conditions		EIRP (dBm)			Limit (dBm)	Verdict
	Temperature	Voltage	Low Channel	Middle Channel	High Channel		
11ac(20MHz)	LT	NV	13.7	13.9	13.8	14	Pass
		LV	13.3	13.8	13.9	14	Pass
		HV	13.4	13.9	13.7	14	Pass
	HT	LV	13.5	13.7	13.6	14	Pass
		HV	13.8	13.8	13.4	14	Pass

Modulation	Test Conditions		EIRP (dBm)		Limit (dBm)	Verdict
	Temperature	Voltage	Low Channel	High Channel		
11ac(40MHz)	NT	NV	13.8	13.5	14	Pass
	LT	LV	13.9	13.1	14	Pass
		HV	13.9	13.1	14	Pass
	HT	LV	13.7	13.2	14	Pass
		HV	13.8	13.5	14	Pass

Modulation	Test Conditions		EIRP (dBm)		Limit (dBm)	Verdict
	Temperature	Voltage	Middle channel			
11ac(80MHz)	NT	NV	13.4		14	Pass
	LT	LV	13.6		14	Pass
		HV	13.3		14	Pass
	HT	LV	13.1		14	Pass
		HV	13.6		14	Pass

A.2 Permitted range of operating frequencies

Test Data

Modulation Mode		802.11a			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5736.482000	5725	5833.713000	5875
LT	LV	5736.481819		5833.712503	
	HV	5736.482674		5833.713040	
HT	LV	5736.482548		5833.713331	
	HV	5736.482048		5833.713268	
Test Verdict		Pass			

Modulation Mode		802.11n(20MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5735.897000	5725	5834.298000	5875
LT	LV	5735.897374		5834.298189	
	HV	5735.897789		5834.297857	
HT	LV	5735.898255		5834.297639	
	HV	5735.897782		5834.297878	
Test Verdict		Pass			

Modulation Mode		802.11n(40MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5736.640000	5725	5813.450000	5875
LT	LV	5736.639936		5813.450124	
	HV	5736.640226		5813.449825	
HT	LV	5736.640149		5813.449656	
	HV	5736.640234		5813.449356	
Test Verdict		Pass			

Modulation Mode		802.11ac(20MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5735.897000	5725	5834.283000	5875
LT	LV	5735.896490		5834.282325	
	HV	5735.896188		5834.283042	
HT	LV	5735.896512		5834.282514	
	HV	5735.896421		5834.282848	
Test Verdict		Pass			

Modulation Mode		802.11ac(40MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5736.760000	5725	5813.510000	5875
LT	LV	5736.759996		5813.509982	
	HV	5736.759849		5813.509548	
HT	LV	5736.760371		5813.509731	
	HV	5736.760640		5813.510465	
Test Verdict		Pass			

Modulation Mode		802.11ac(80MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage				
NT	NV	5736.790000	5725	5813.420000	5875
LT	LV	5736.790623		5813.419989	
	HV	5736.789754		5813.420407	
HT	LV	5736.789854		5813.420451	
	HV	5736.790175		5813.420854	
Test Verdict		Pass			

99% Bandwidth

Modulation Mode		802.11a			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.6565	5725	5833.2995	5875
Test Verdict		Pass			

Modulation Mode		802.11n(20MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.1400	5725	5833.8770	5875
Test Verdict		Pass			

Modulation Mode		802.11n(40MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.8595	5725	5813.1960	5875
Test Verdict		Pass			

Modulation Mode		802.11ac(20MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.1430	5725	5833.8390	5875
Test Verdict		Pass			

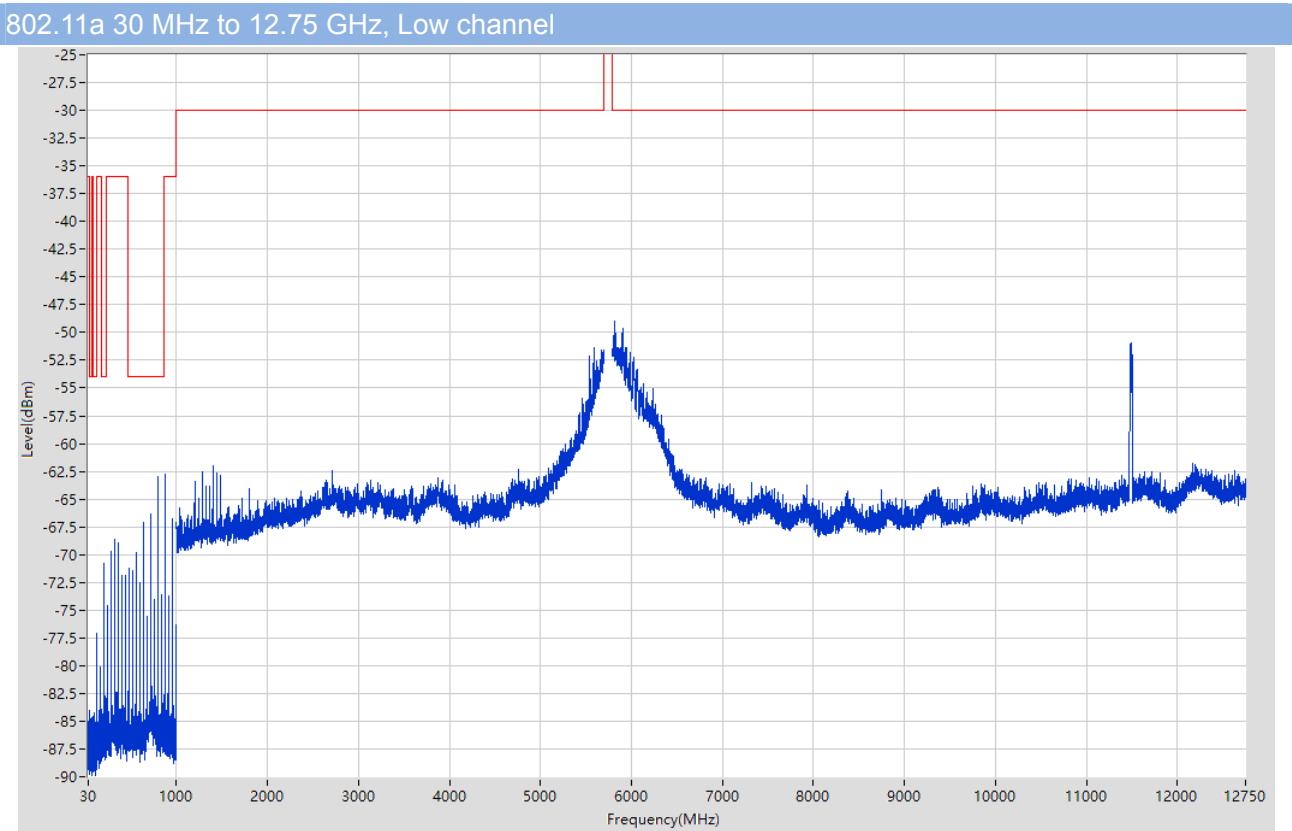
Modulation Mode		802.11ac(40MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.8125	5725	5813.1795	5875
Test Verdict		Pass			

Modulation Mode		802.11ac(80MHz)			
Test Result					
Test Conditions		Measured Frequency at the Lowest (MHz)	Limit of the Lowest (MHz)	Measured Frequency at the Highest (MHz)	Limit of the Highest (MHz)
Temperature	Voltage	5736.9365	5725	5813.0635	5875
Test Verdict		Pass			

A.3 Unwanted emissions in the spurious domain

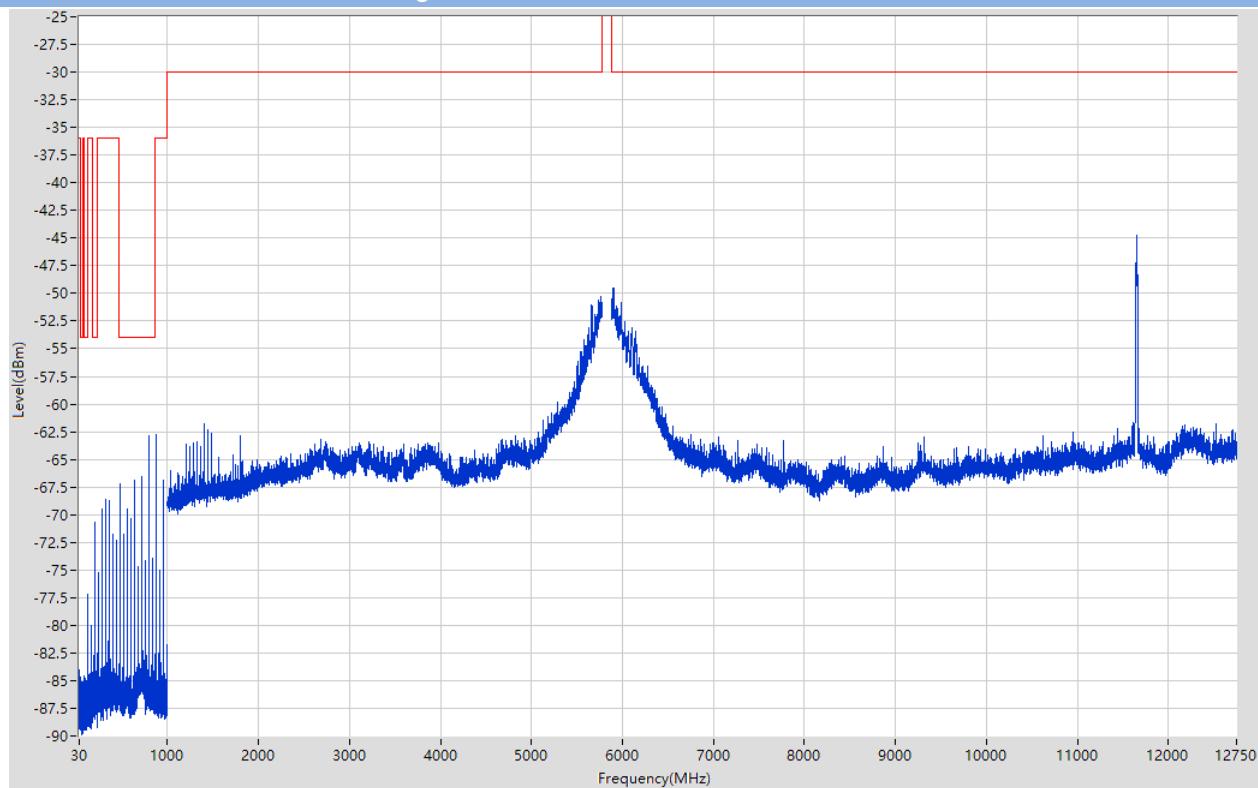
Note: The spurious above 12.75G is noise only, do not show on the report.

Conducted Test Data



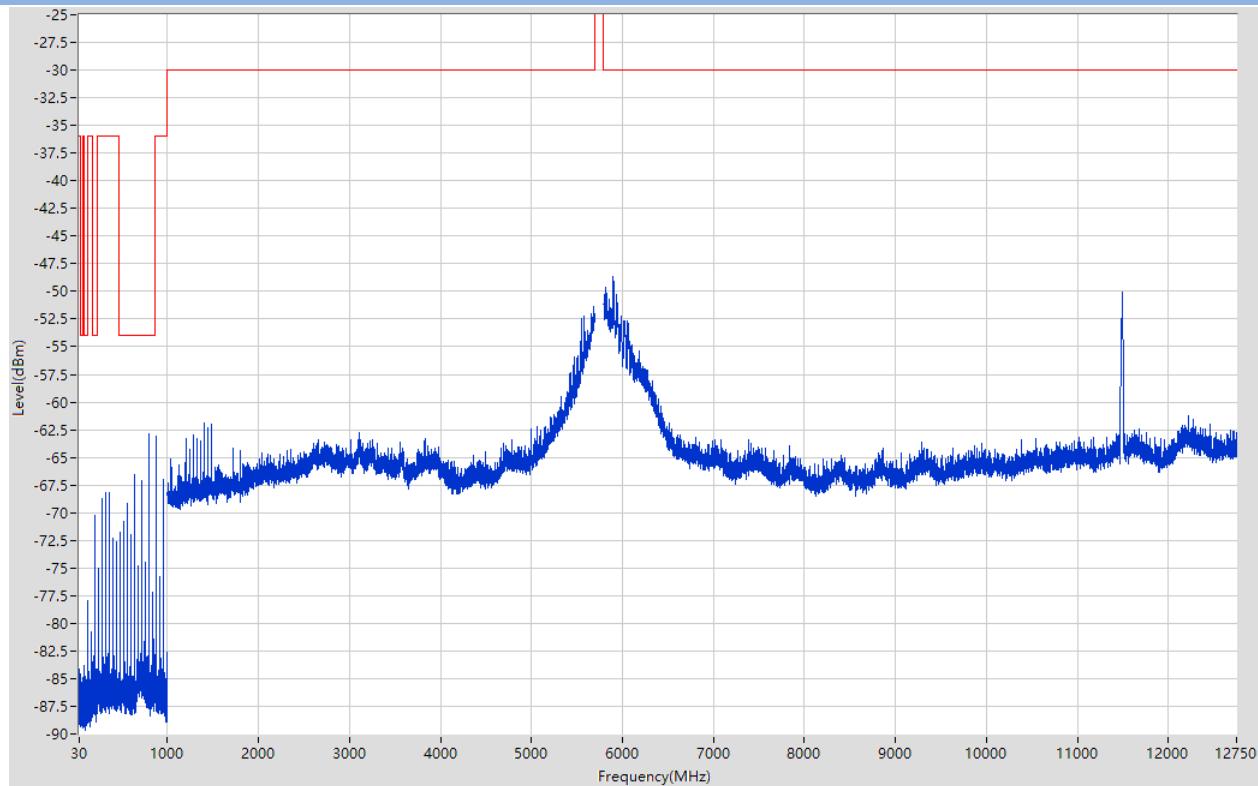
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	41.787	-84.02	-36	Pass	601
47	74	0.1	Peak	72.56	-84.71	-54	Pass	601
74	87.5	0.1	Peak	85.948	-84.68	-36	Pass	601
87.5	118	0.1	Peak	97.87	-84.22	-54	Pass	601
118	174	0.1	Peak	119.96	-77.04	-36	Pass	601
174	230	0.1	Peak	200.04	-70.81	-54	Pass	601
230	470	0.1	Peak	320	-68.59	-36	Pass	601
470	862	0.1	Peak	799.933	-62.97	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.78	-36	Pass	601
1000	5694.5	1	Peak	5592.143	-51.38	-30	Pass	4725
5795.5	12750	1	Peak	5819.693	-49.03	-30	Pass	6900

802.11a 30 MHz to 12.75 GHz, High channel



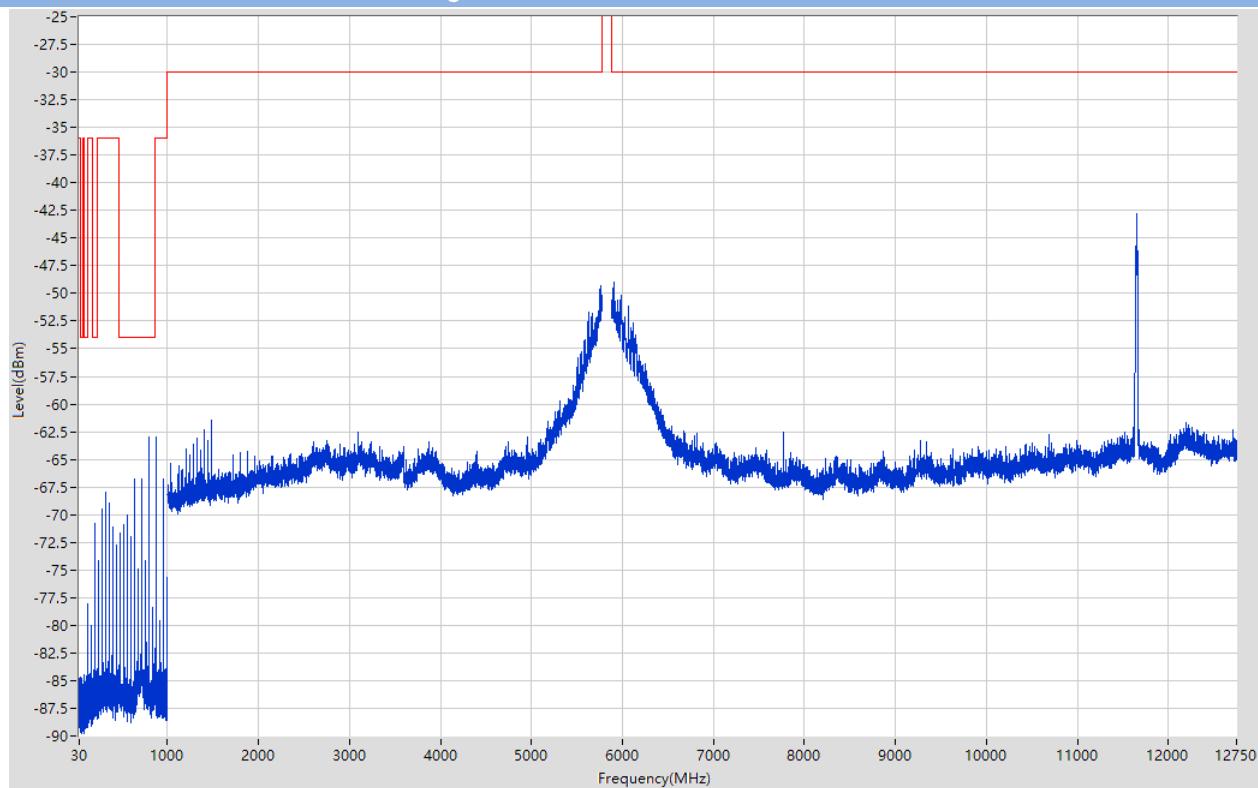
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	36.12	-84.08	-36	Pass	601
47	74	0.1	Peak	57.215	-85.12	-54	Pass	601
74	87.5	0.1	Peak	80.188	-84.59	-36	Pass	601
87.5	118	0.1	Peak	95.938	-84.83	-54	Pass	601
118	174	0.1	Peak	120.053	-77.21	-36	Pass	601
174	230	0.1	Peak	200.04	-70.65	-54	Pass	601
230	470	0.1	Peak	320	-68.66	-36	Pass	601
470	862	0.1	Peak	799.933	-62.92	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.76	-36	Pass	601
1000	5774.5	1	Peak	5766.414	-50.32	-30	Pass	4725
5875.5	12750	1	Peak	11649.921	-44.76	-30	Pass	6900

802.11n20 30 MHz to 12.75 GHz, Low channel



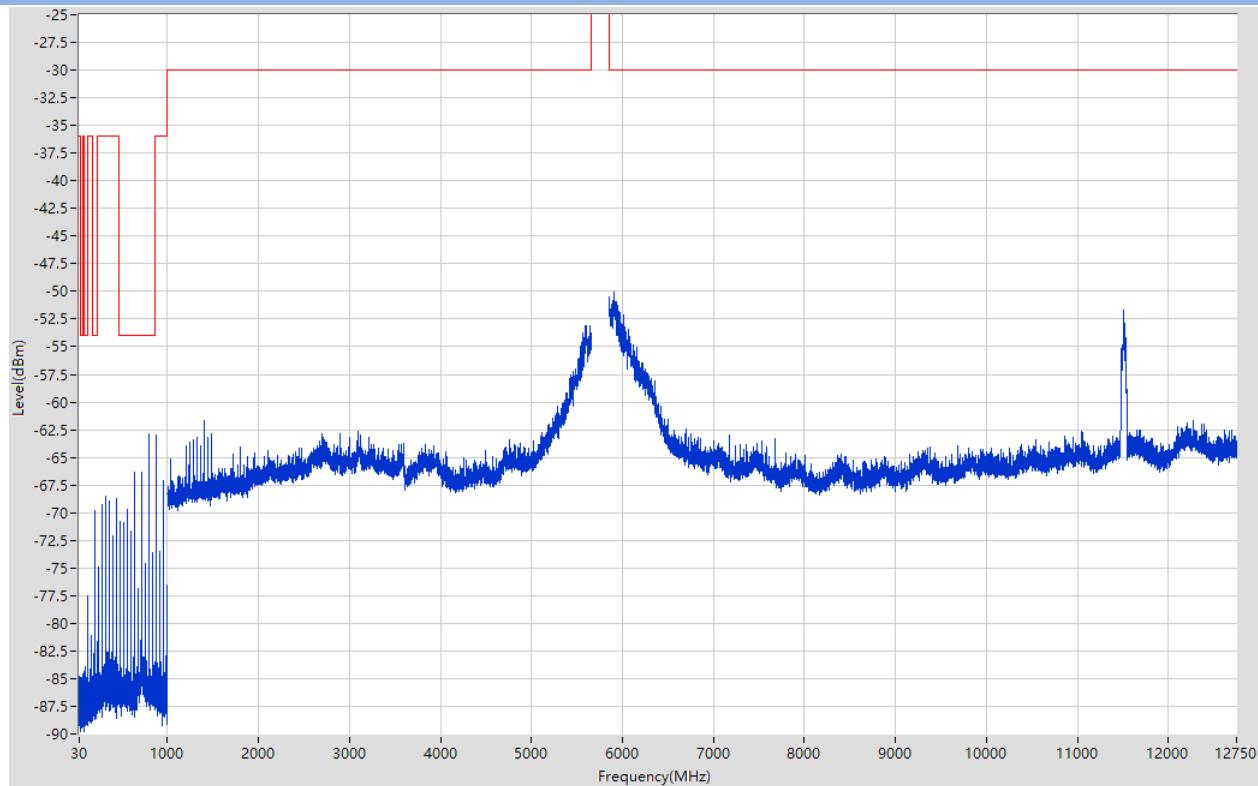
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	36.205	-84.09	-36	Pass	601
47	74	0.1	Peak	69.005	-84.85	-54	Pass	601
74	87.5	0.1	Peak	85.88	-83.81	-36	Pass	601
87.5	118	0.1	Peak	94.464	-84.81	-54	Pass	601
118	174	0.1	Peak	120.053	-77.92	-36	Pass	601
174	230	0.1	Peak	200.04	-70.26	-54	Pass	601
230	470	0.1	Peak	360	-68.17	-36	Pass	601
470	862	0.1	Peak	799.933	-62.89	-54	Pass	601
862	1000	0.1	Peak	879.94	-63.04	-36	Pass	601
1000	5694.5	1	Peak	5689.531	-51.4	-30	Pass	4725
5795.5	12750	1	Peak	5899.329	-48.61	-30	Pass	6900

802.11n20 30 MHz to 12.75 GHz, High channel



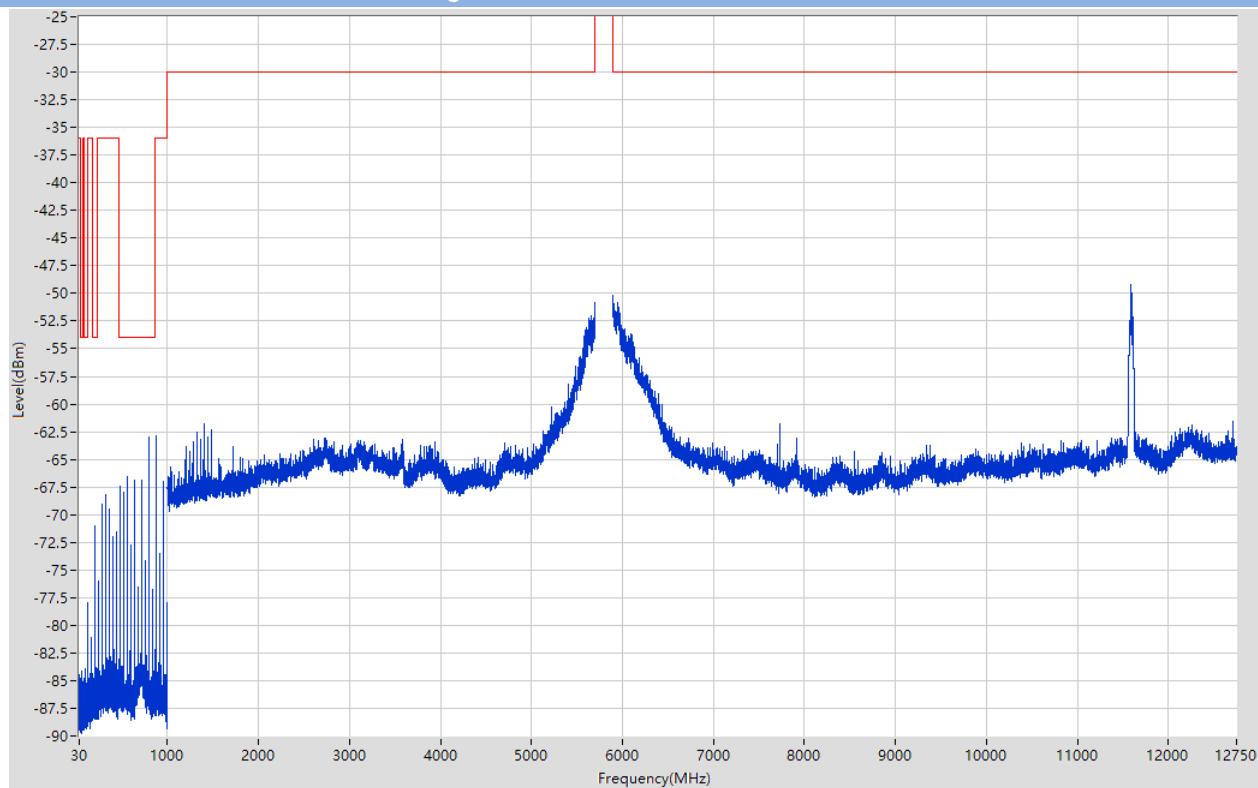
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	43.883	-84.71	-36	Pass	601
47	74	0.1	Peak	61.31	-84.75	-54	Pass	601
74	87.5	0.1	Peak	86.825	-84.43	-36	Pass	601
87.5	118	0.1	Peak	105.8	-84.53	-54	Pass	601
118	174	0.1	Peak	119.96	-78.01	-36	Pass	601
174	230	0.1	Peak	200.04	-70.81	-54	Pass	601
230	470	0.1	Peak	320	-68	-36	Pass	601
470	862	0.1	Peak	799.933	-62.97	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.96	-36	Pass	601
1000	5774.5	1	Peak	5764.393	-49.36	-30	Pass	4725
5875.5	12750	1	Peak	11656.896	-42.83	-30	Pass	6900

802.11n40 30 MHz to 12.75 GHz, Low channel



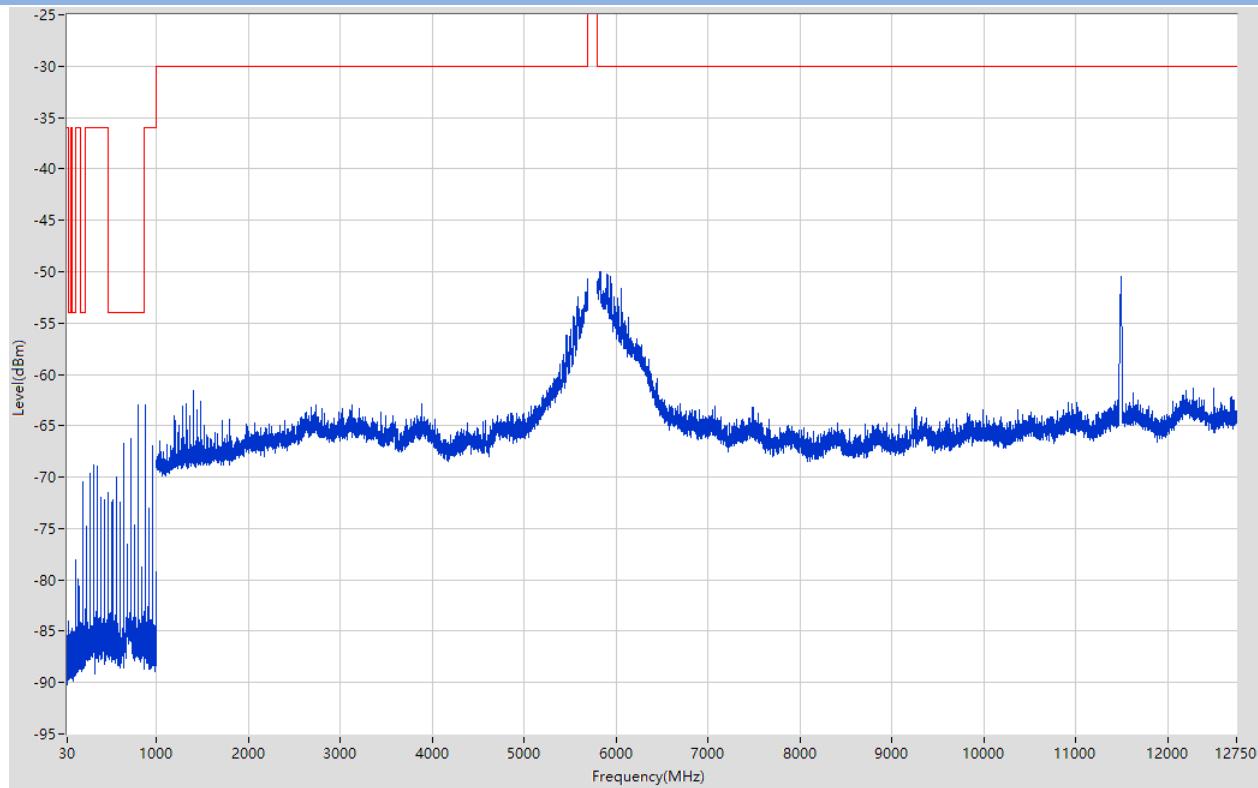
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	32.465	-84.79	-36	Pass	601
47	74	0.1	Peak	63.155	-84.53	-54	Pass	601
74	87.5	0.1	Peak	79.828	-84.38	-36	Pass	601
87.5	118	0.1	Peak	97.108	-83.9	-54	Pass	601
118	174	0.1	Peak	119.96	-77.52	-36	Pass	601
174	230	0.1	Peak	200.04	-69.78	-54	Pass	601
230	470	0.1	Peak	320	-68.48	-36	Pass	601
470	862	0.1	Peak	799.933	-62.9	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.94	-36	Pass	601
1000	5654.5	1	Peak	5585.53	-53.12	-30	Pass	4725
5855.5	12750	1	Peak	5912.463	-50.05	-30	Pass	6900

802.11n40 30 MHz to 12.75 GHz, High channel



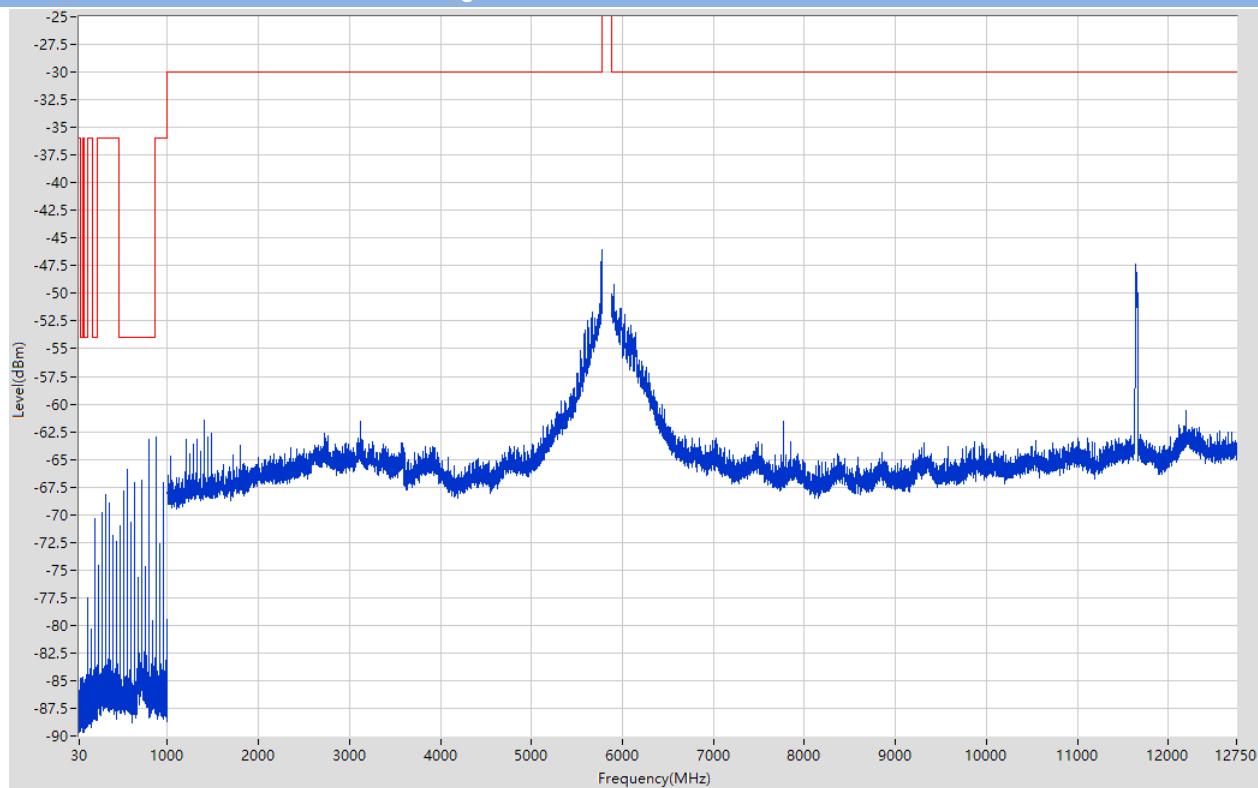
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	34.42	-84.48	-36	Pass	601
47	74	0.1	Peak	52.04	-84.14	-54	Pass	601
74	87.5	0.1	Peak	86.915	-84.74	-36	Pass	601
87.5	118	0.1	Peak	98.429	-83.91	-54	Pass	601
118	174	0.1	Peak	119.96	-77.94	-36	Pass	601
174	230	0.1	Peak	199.947	-70.96	-54	Pass	601
230	470	0.1	Peak	320	-68.22	-36	Pass	601
470	862	0.1	Peak	799.933	-62.96	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.9	-36	Pass	601
1000	5694.5	1	Peak	5691.519	-50.86	-30	Pass	4725
5895.5	12750	1	Peak	11588.54	-49.21	-30	Pass	6900

802.11ac20 30 MHz to 12.75 GHz, Low channel



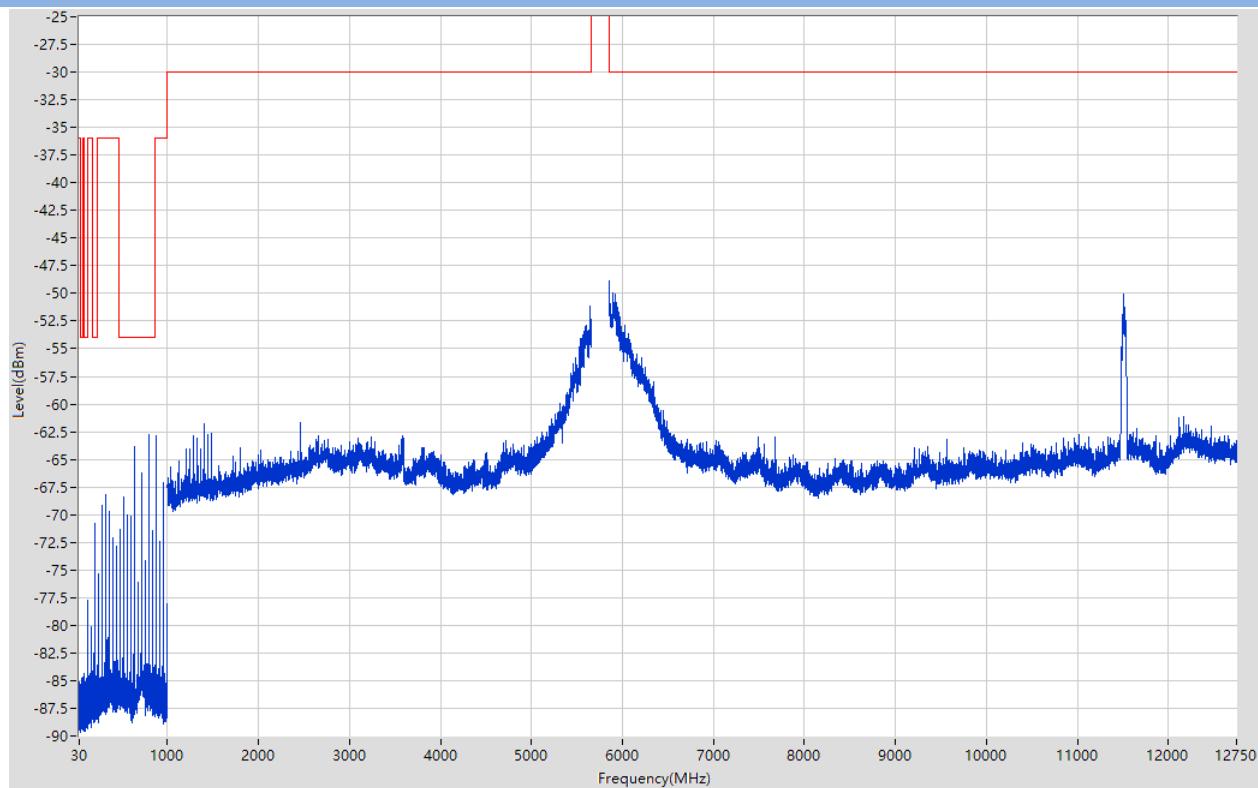
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	43.968	-84.04	-36	Pass	601
47	74	0.1	Peak	65.27	-85.09	-54	Pass	601
74	87.5	0.1	Peak	84.08	-84.71	-36	Pass	601
87.5	118	0.1	Peak	117.441	-84.72	-54	Pass	601
118	174	0.1	Peak	119.96	-78.07	-36	Pass	601
174	230	0.1	Peak	200.04	-70.48	-54	Pass	601
230	470	0.1	Peak	320	-68.86	-36	Pass	601
470	862	0.1	Peak	799.933	-62.96	-54	Pass	601
862	1000	0.1	Peak	879.94	-63.01	-36	Pass	601
1000	5694.5	1	Peak	5691.519	-50.74	-30	Pass	4725
5795.5	12750	1	Peak	5817.677	-49.96	-30	Pass	6900

802.11ac20 30 MHz to 12.75 GHz, High channel



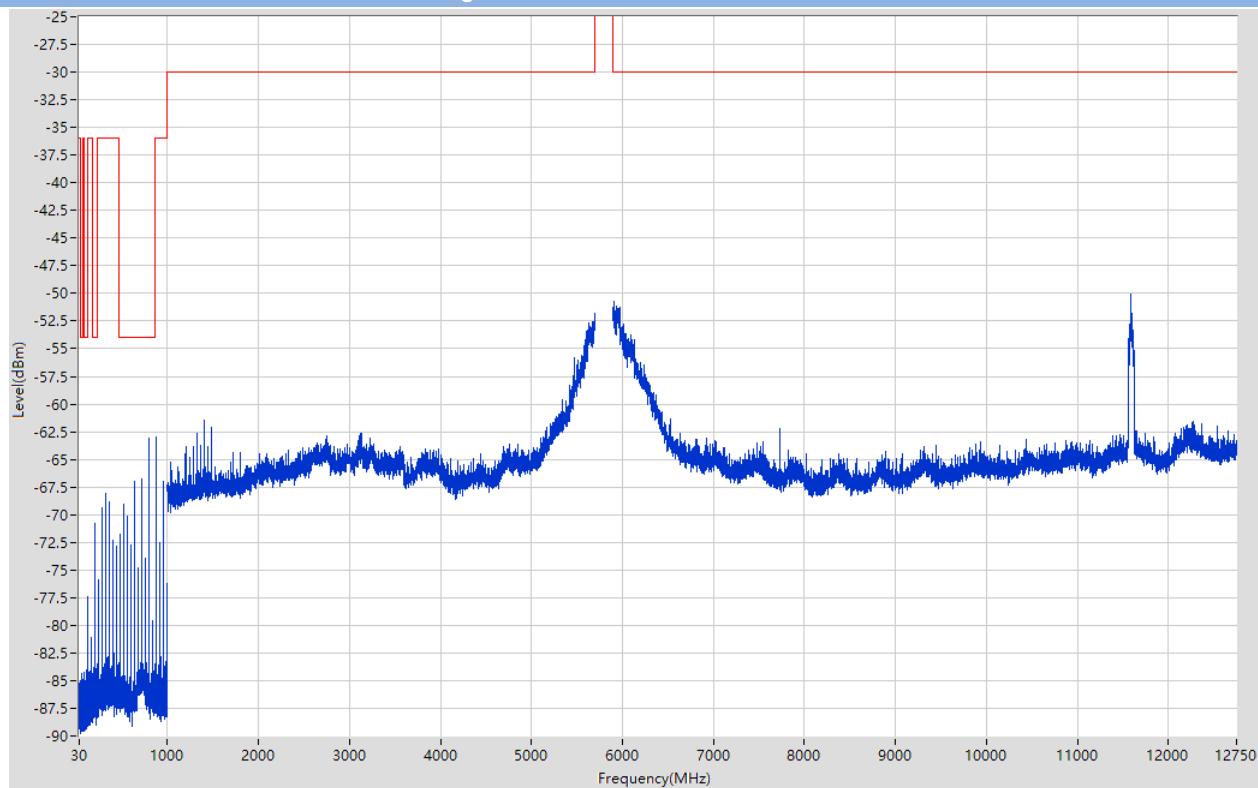
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	44.252	-84.74	-36	Pass	601
47	74	0.1	Peak	57.71	-84.78	-54	Pass	601
74	87.5	0.1	Peak	75.418	-84.68	-36	Pass	601
87.5	118	0.1	Peak	113.171	-84.41	-54	Pass	601
118	174	0.1	Peak	120.053	-77.51	-36	Pass	601
174	230	0.1	Peak	199.947	-70.35	-54	Pass	601
230	470	0.1	Peak	320	-68.18	-36	Pass	601
470	862	0.1	Peak	799.933	-63.17	-54	Pass	601
862	1000	0.1	Peak	879.94	-63.03	-36	Pass	601
1000	5774.5	1	Peak	5770.457	-46.07	-30	Pass	4725
5875.5	12750	1	Peak	11644.938	-47.4	-30	Pass	6900

802.11ac40 30 MHz to 12.75 GHz, Low channel



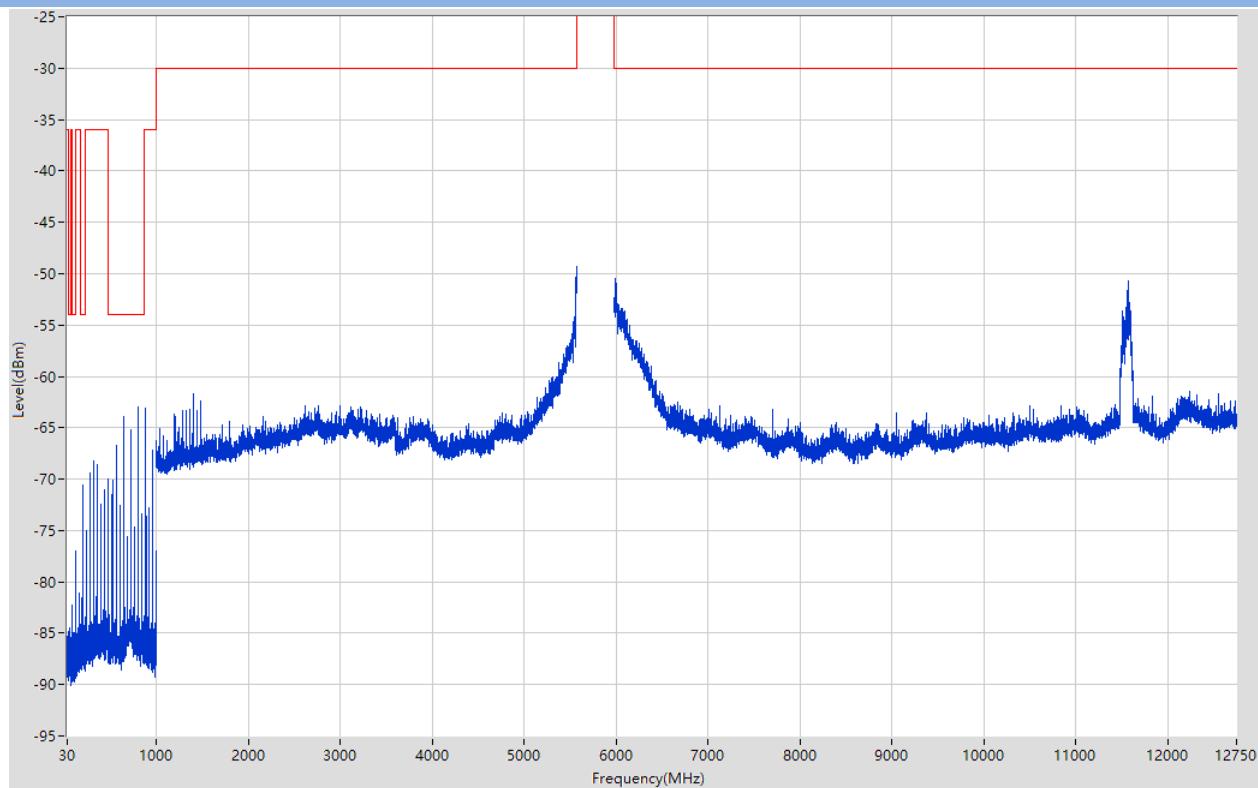
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	32.493	-85.14	-36	Pass	601
47	74	0.1	Peak	73.685	-84.64	-54	Pass	601
74	87.5	0.1	Peak	87.5	-84.34	-36	Pass	601
87.5	118	0.1	Peak	103.919	-84.83	-54	Pass	601
118	174	0.1	Peak	119.96	-77.77	-36	Pass	601
174	230	0.1	Peak	199.947	-70.79	-54	Pass	601
230	470	0.1	Peak	320	-68.19	-36	Pass	601
470	862	0.1	Peak	799.933	-62.79	-54	Pass	601
862	1000	0.1	Peak	879.94	-62.91	-36	Pass	601
1000	5654.5	1	Peak	5643.662	-51.19	-30	Pass	4725
5855.5	12750	1	Peak	5856.499	-48.89	-30	Pass	6900

802.11ac40 30 MHz to 12.75 GHz, High channel



Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	43.855	-84.98	-36	Pass	601
47	74	0.1	Peak	62.255	-84.32	-54	Pass	601
74	87.5	0.1	Peak	84.575	-84.24	-36	Pass	601
87.5	118	0.1	Peak	112.408	-84	-54	Pass	601
118	174	0.1	Peak	120.053	-77.44	-36	Pass	601
174	230	0.1	Peak	199.947	-70.75	-54	Pass	601
230	470	0.1	Peak	320	-68.03	-36	Pass	601
470	862	0.1	Peak	799.933	-63.07	-54	Pass	601
862	1000	0.1	Peak	879.94	-63.03	-36	Pass	601
1000	5694.5	1	Peak	5694.5	-51.84	-30	Pass	4725
5895.5	12750	1	Peak	11589.534	-50.11	-30	Pass	6900

802.11ac80 30 MHz to 12.75 GHz, Middle channel

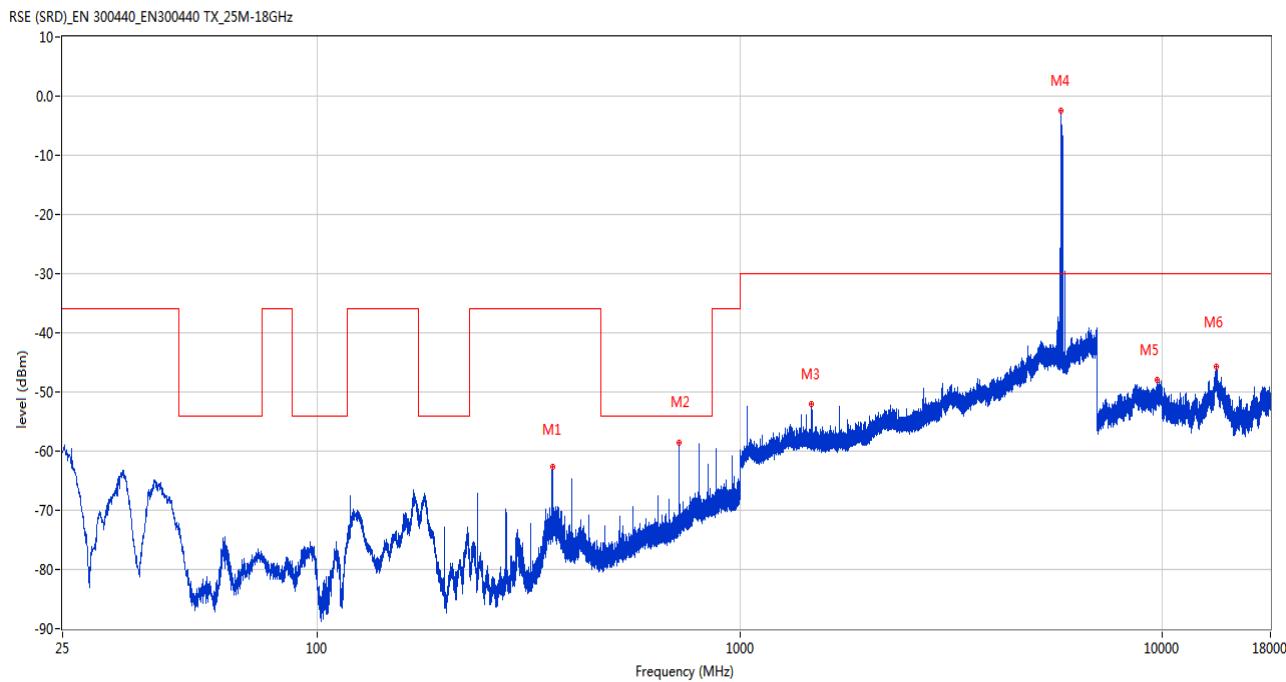


Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
30	47	0.1	Peak	39.548	-84.85	-36	Pass	601
47	74	0.1	Peak	50.06	-84.51	-54	Pass	601
74	87.5	0.1	Peak	80.008	-82.22	-36	Pass	601
87.5	118	0.1	Peak	115.001	-84.83	-54	Pass	601
118	174	0.1	Peak	119.96	-77.06	-36	Pass	601
174	230	0.1	Peak	200.04	-70.6	-54	Pass	601
230	470	0.1	Peak	320	-68.2	-36	Pass	601
470	862	0.1	Peak	799.933	-62.96	-54	Pass	601
862	1000	0.1	Peak	879.94	-63.08	-36	Pass	601
1000	5574.5	1	Peak	5569.658	-49.31	-30	Pass	4725
5975.5	12750	1	Peak	5990.229	-50.51	-30	Pass	6900

Note: The spurious above 18G is noise only, do not show on the report.

Cabinet Radiated Test Data

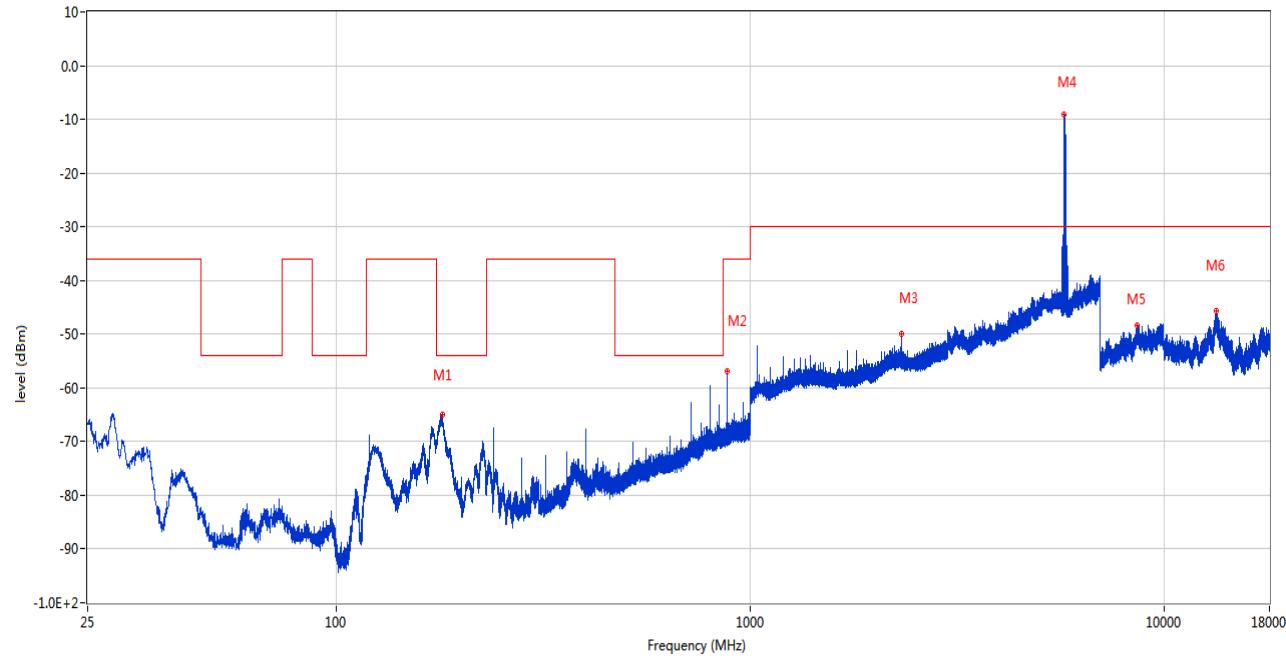
25 MHz to 18 GHz, ANT V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
360.010	-62.70	-10.32	-36.0	-26.70	100.00	Vertical	Horizontal	Pass
720.029	-58.48	-1.10	-54.0	-4.48	346.00	Vertical	Horizontal	Pass
1479.800	-51.96	-4.97	-30.0	-21.96	327.00	Vertical	Horizontal	Pass
5757.400	-2.39	9.19	-30.0	27.61	12.00	Vertical	Horizontal	N/A
9689.850	-47.88	7.44	-30.0	-17.88	360.00	Vertical	Horizontal	Pass
13428.825	-45.79	6.12	-30.0	-15.79	187.00	Vertical	Horizontal	Pass

25 MHz to 18 GHz, ANT H

RSE (SRD)_EN 300440_EN300440 TX_25M-18GHz



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
180.269	-65.08	-13.88	-54.0	-11.08	101.00	Horizontal	Horizontal	Pass
879.977	-56.98	2.90	-36.0	-20.98	249.00	Horizontal	Horizontal	Pass
2318.300	-49.92	-1.23	-30.0	-19.92	309.00	Horizontal	Horizontal	Pass
5746.200	-9.15	8.87	-30.0	20.85	128.00	Horizontal	Horizontal	N/A
8637.025	-48.39	5.86	-30.0	-18.39	241.00	Horizontal	Horizontal	Pass
13415.437	-45.61	5.91	-30.0	-15.61	234.00	Horizontal	Horizontal	Pass

A.4 Blocking or desensitization

Test Data

Note1: The limit of receiver category 1 is not less than $-30\text{dBm} + k$, which k is $-20\log f - 10\log BW$, BW is mean channel bandwidth in MHz

Note2: Only the worst case was shown at the test plots.

Low channel

Nominal Frequency (MHz)	Blocking Signal Frequency (MHz)	Minimum Blocking Level (dBm)	Minimum Wanted Criteria PER (%)	Limit (dBm)	Verdict
5745	4745	-11.23	10	-58.20	Pass
	5345	-19.25	10	-58.20	Pass
	5545	-23.89	10	-58.20	Pass
	5945	-22.15	10	-58.20	Pass
	6145	-18.26	10	-58.20	Pass
	6745	-9.34	10	-58.20	Pass

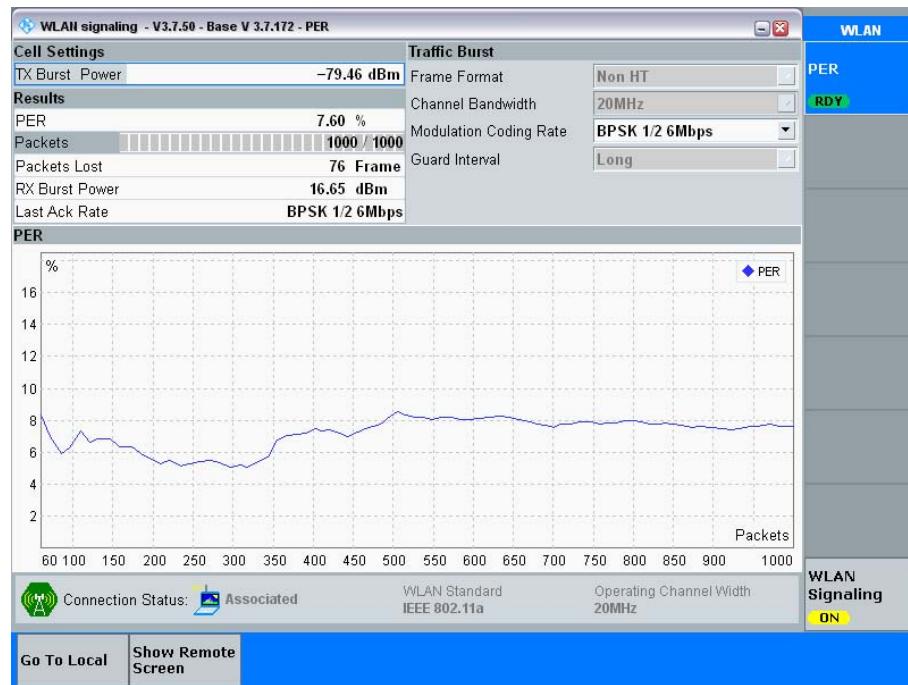
High channel

Nominal frequency (MHz)	Blocking Signal Frequency (MHz)	Minimum Blocking Level (dBm)	Wanted criteria PER (%)	Limit (dBm)	Verdict
5825	4825	-10.51	10	-58.32	Pass
	5425	-20.14	10	-58.32	Pass
	5625	-24.68	10	-58.32	Pass
	6025	-23.10	10	-58.32	Pass
	6225	-18.25	10	-58.32	Pass
	6825	-9.13	10	-58.32	Pass

Test plots

Low channel

Wanted criteria PER (%)



High channel

Wanted criteria PER (%)

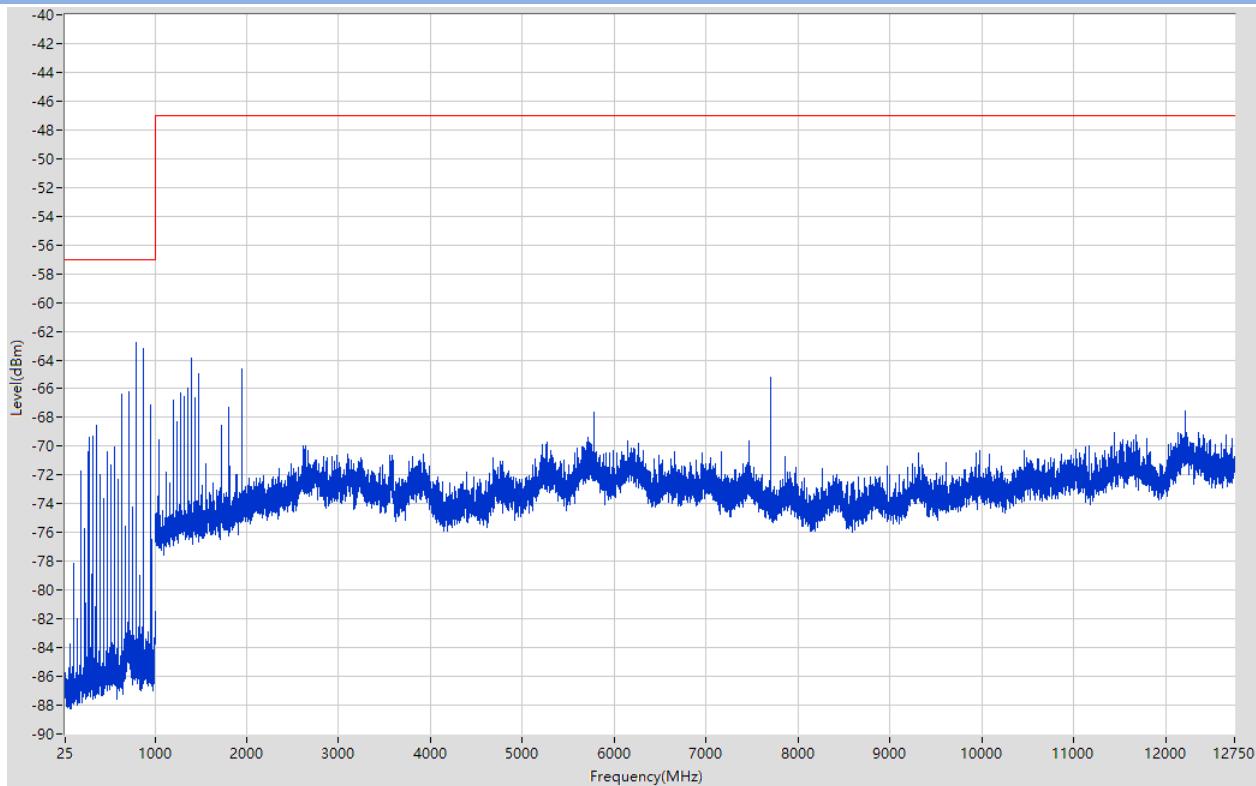


A.5 Receiver spurious emissions

Note: The spurious above 12.75G is noise only, do not show on the report.

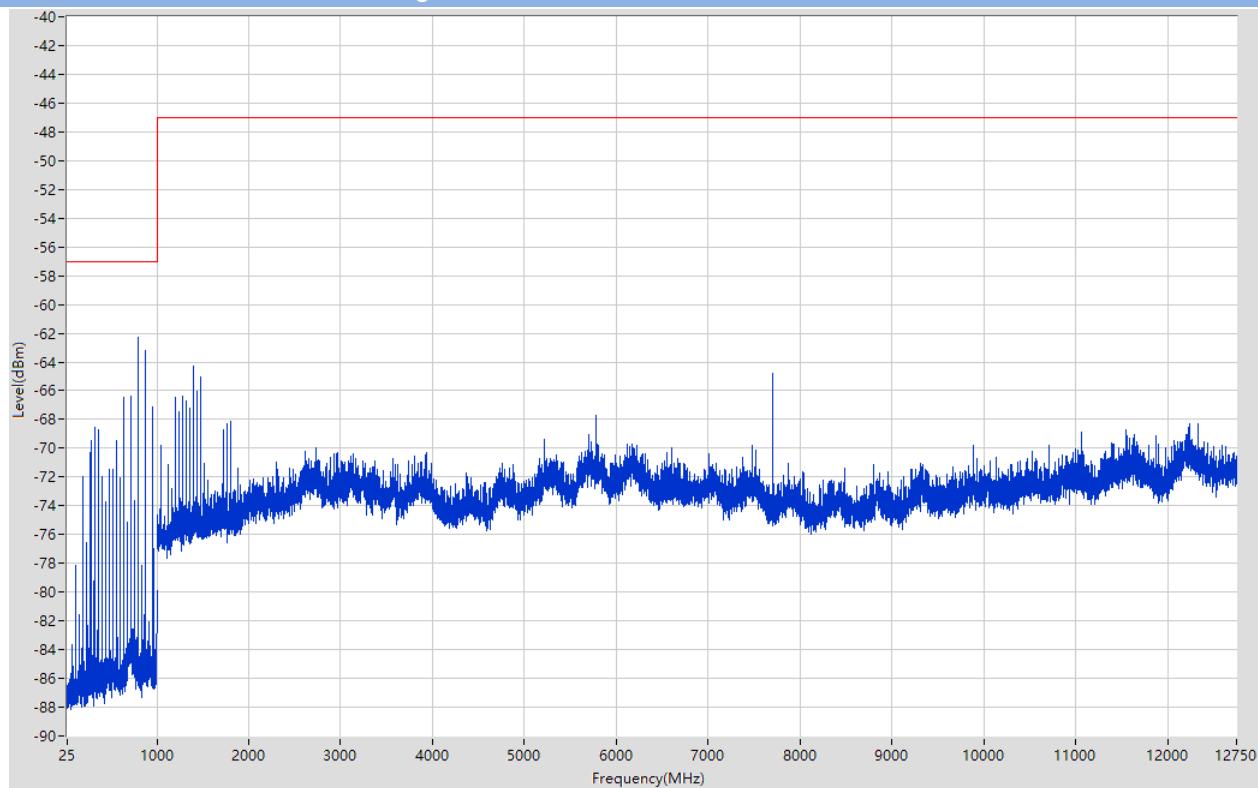
Conducted Test Data

802.11a 30 MHz to 12.75 GHz, Low channel



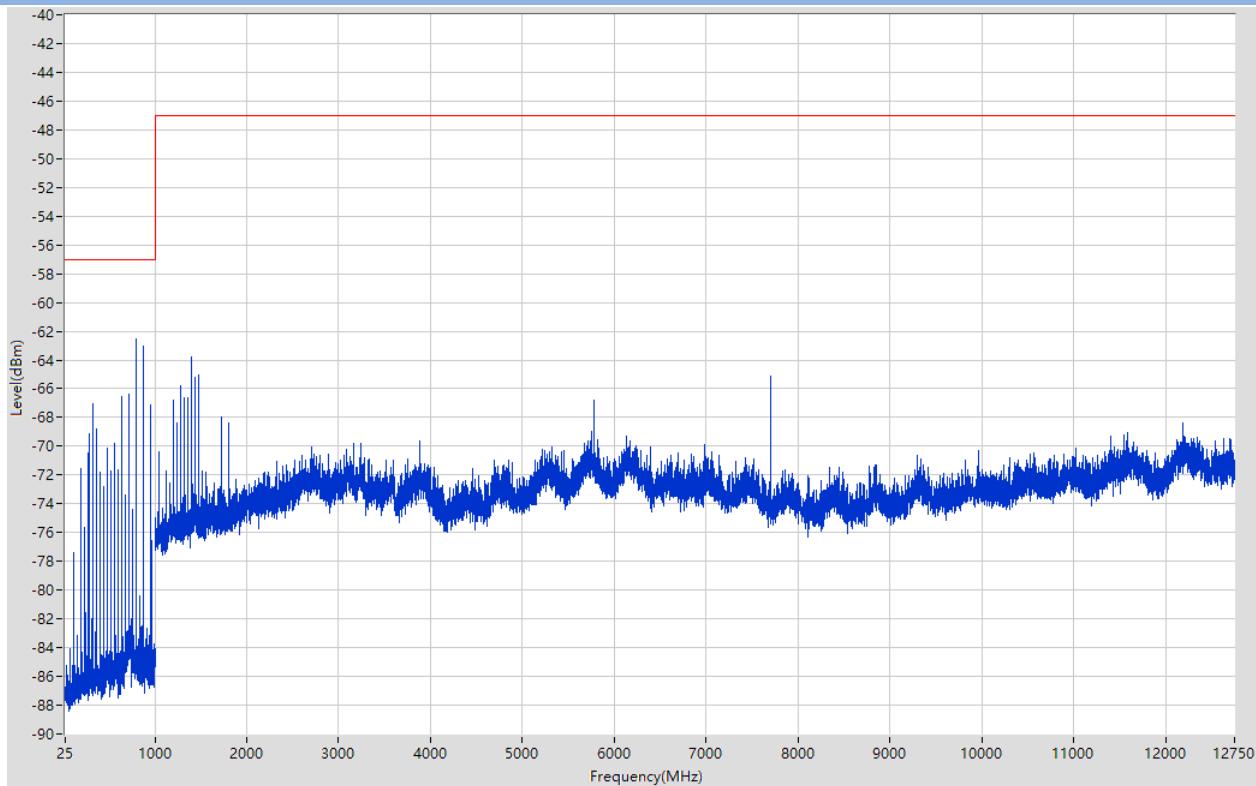
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.78	-57	N/A	1001
			RMS		-72.48		Pass	30000
1000	12750	1	Peak	1400.034	-63.86	-47	Pass	11750

802.11a 30 MHz to 12.75 GHz, High channel



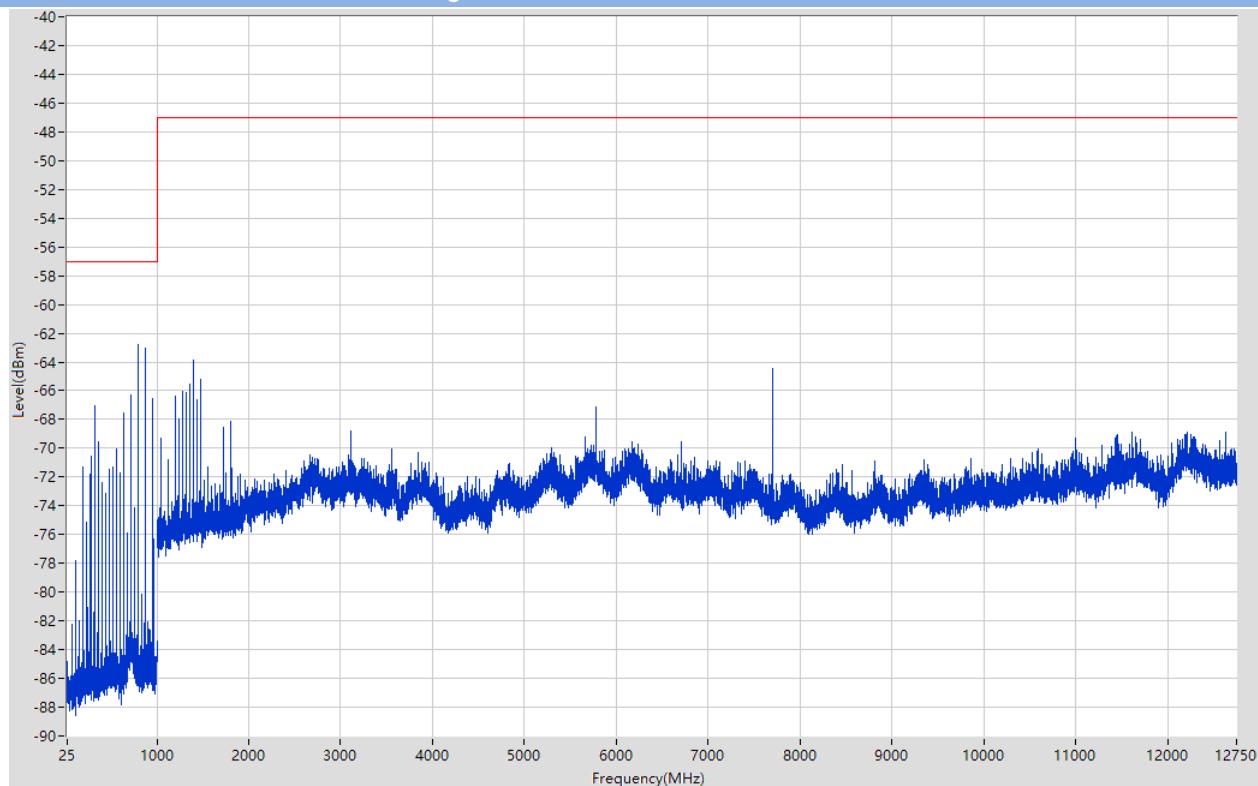
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.29	-57	N/A	1001
			RMS		-72.33		Pass	30000
1000	12750	1	Peak	1400.034	-64.33	-47	Pass	11750

802.11n20 30 MHz to 12.75 GHz, Low channel



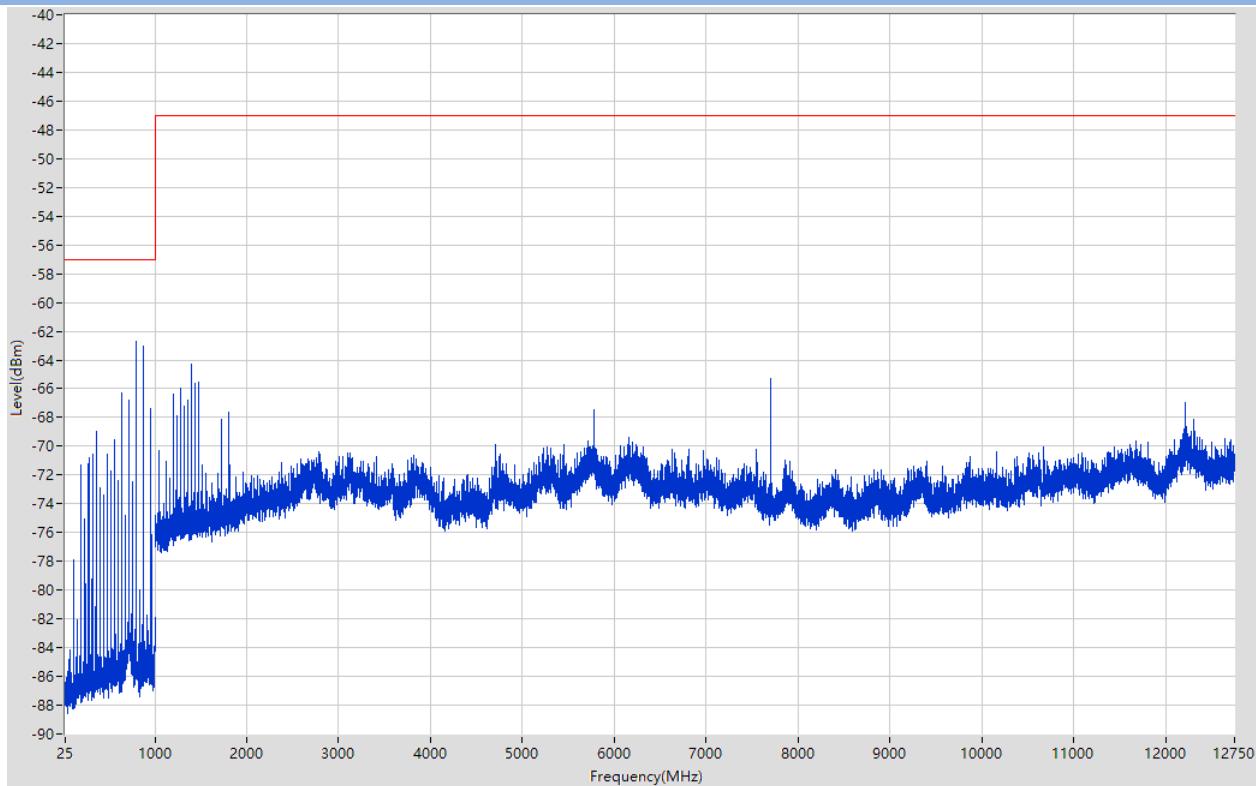
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.52	-57	N/A	1001
			RMS		-72.11		Pass	30000
1000	12750	1	Peak	1400.034	-63.75	-47	Pass	11750

802.11n20 30 MHz to 12.75 GHz, High channel



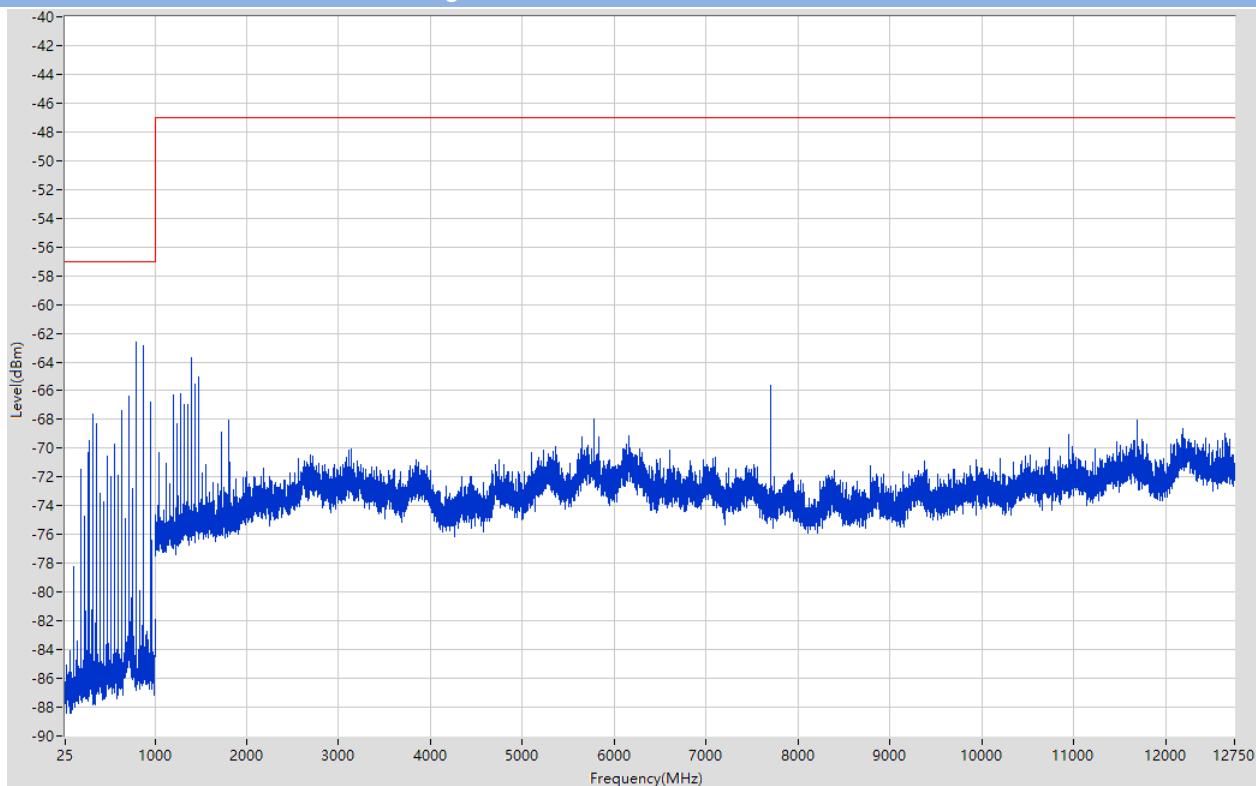
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.75	-57	N/A	1001
			RMS		-72.34		Pass	30000
1000	12750	1	Peak	1400.034	-63.84	-47	Pass	11750

802.11n40 30 MHz to 12.75 GHz, Low channel



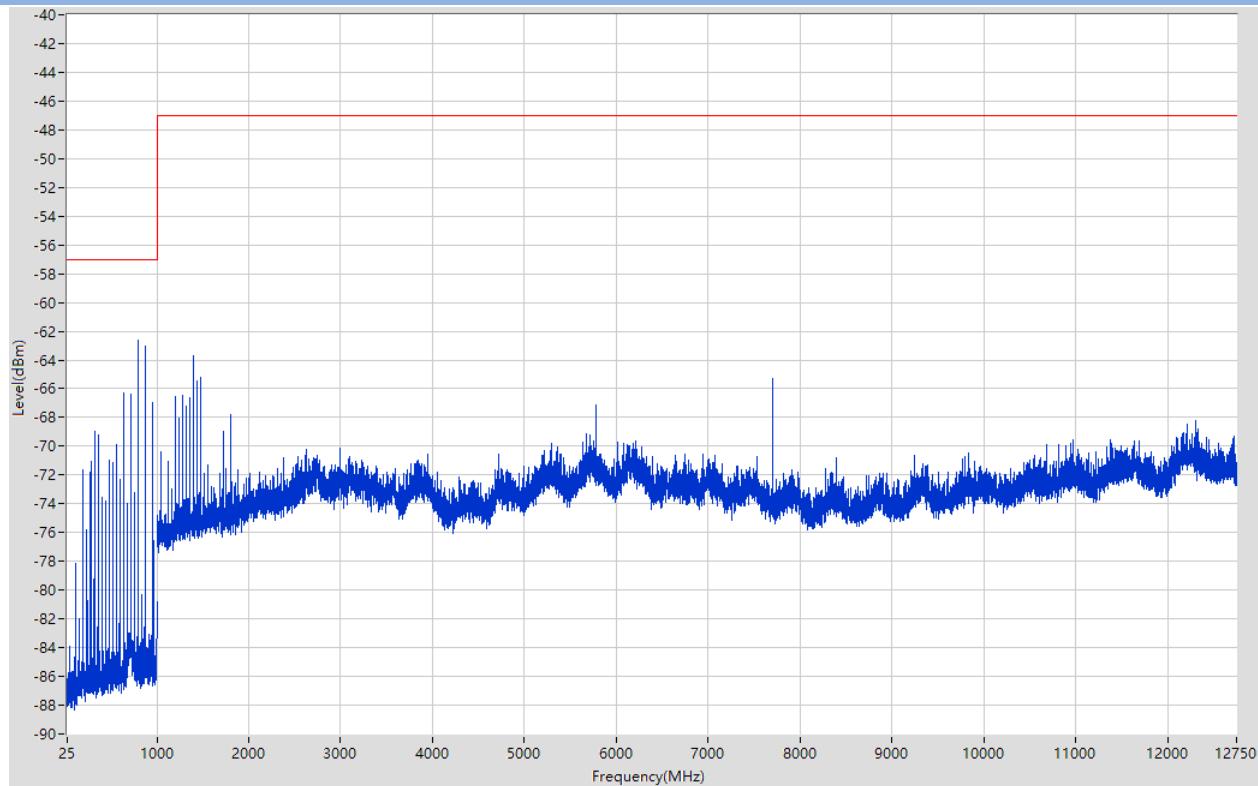
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.7	-57	N/A	1001
			RMS		-73.42		Pass	30000
1000	12750	1	Peak	1400.034	-64.26	-47	Pass	11750

802.11n40 30 MHz to 12.75 GHz, High channel



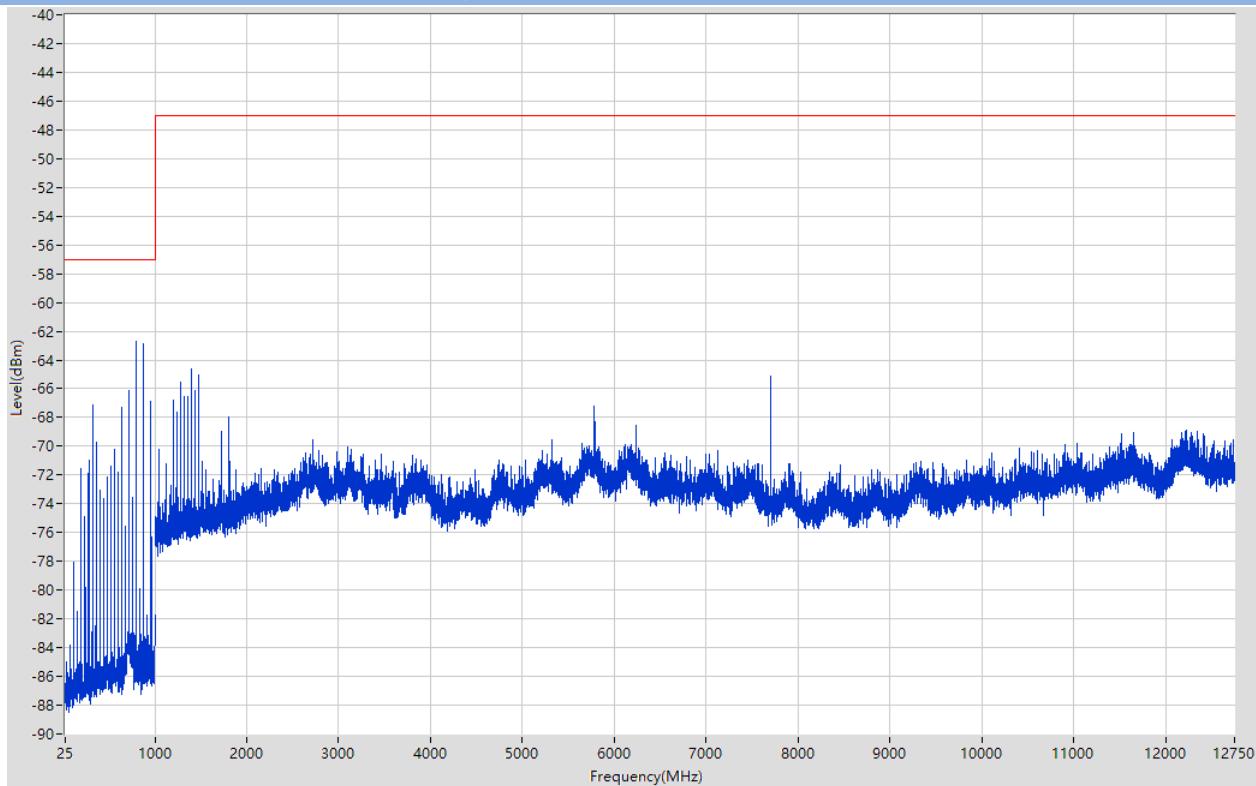
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.65	-57	N/A	1001
			RMS		-72.32		Pass	30000
1000	12750	1	Peak	1400.034	-63.68	-47	Pass	11750

802.11ac20 30 MHz to 12.75 GHz, Low channel



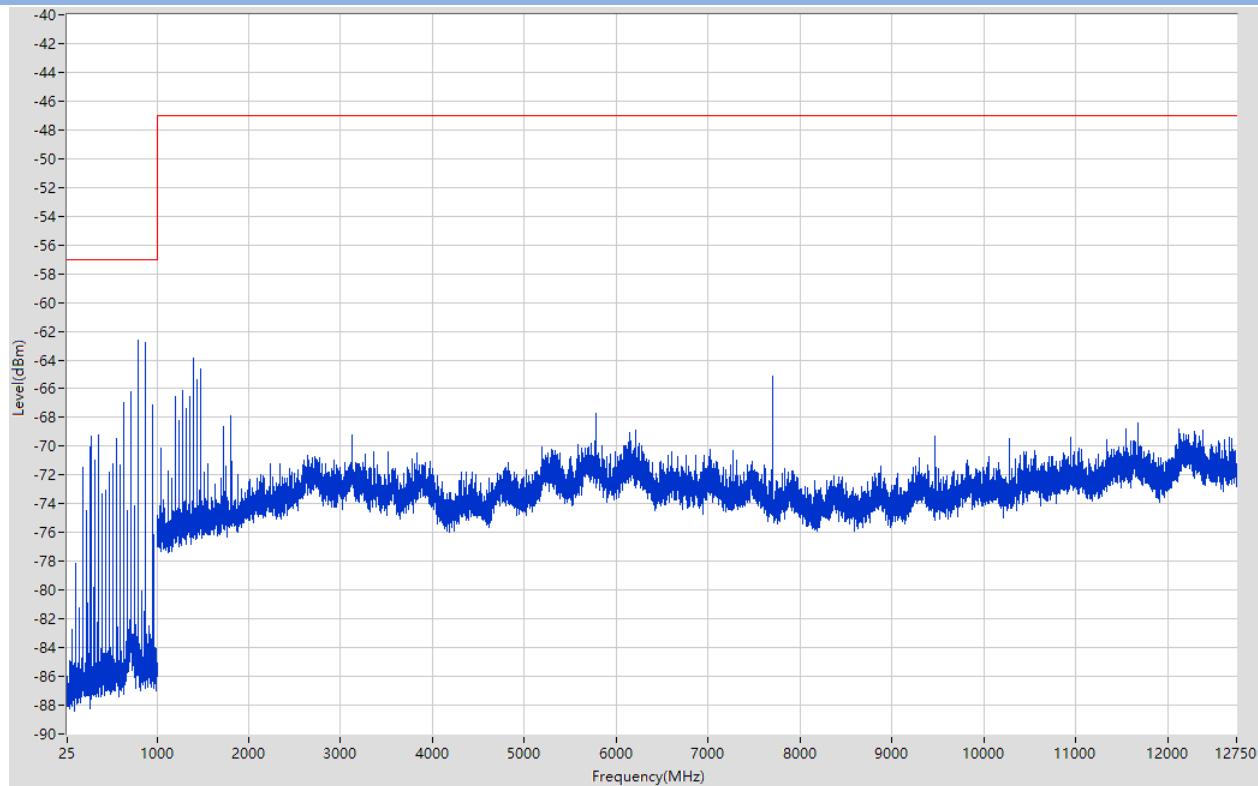
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.61	-57	N/A	1001
			RMS		-72.29		Pass	30000
1000	12750	1	Peak	1400.034	-63.69	-47	Pass	11750

802.11ac20 30 MHz to 12.75 GHz, High channel



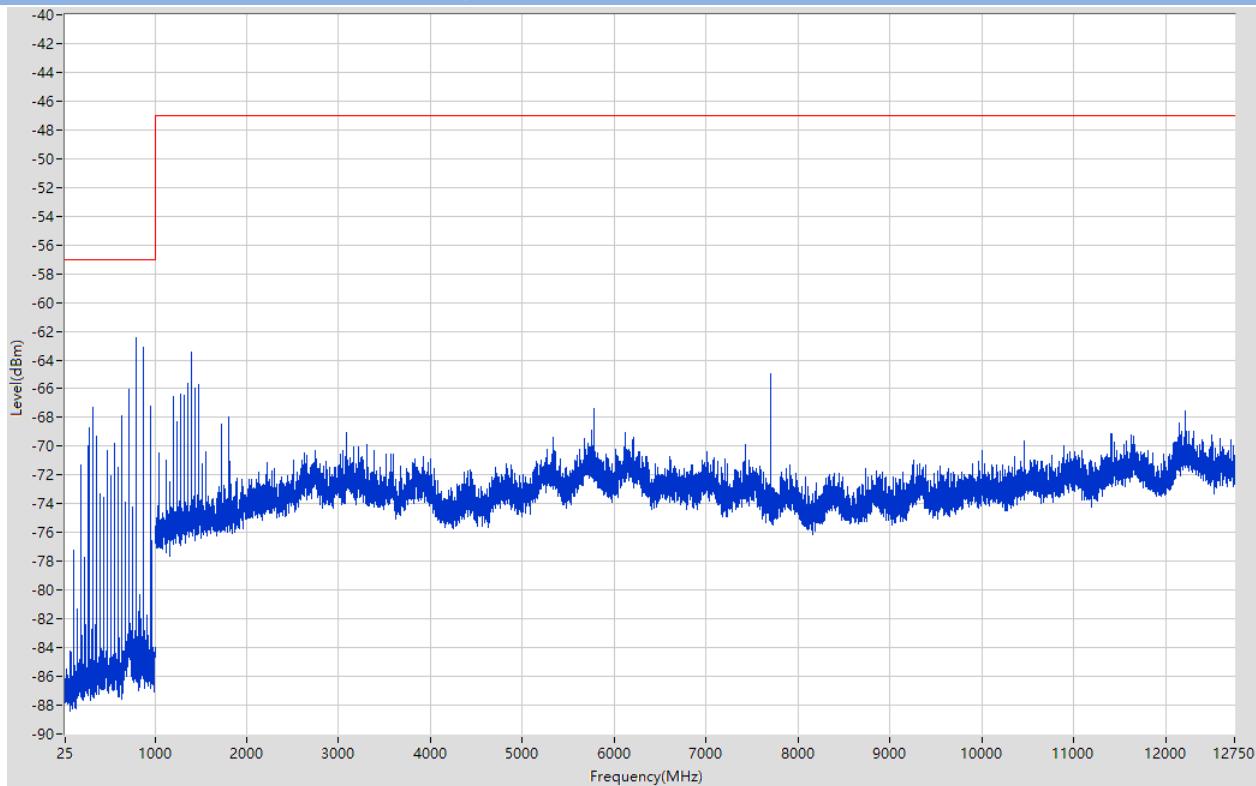
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.7	-57	N/A	1001
			RMS		-72.46		Pass	30000
1000	12750	1	Peak	1400.034	-64.64	-47	Pass	11750

802.11ac40 30 MHz to 12.75 GHz, Low channel



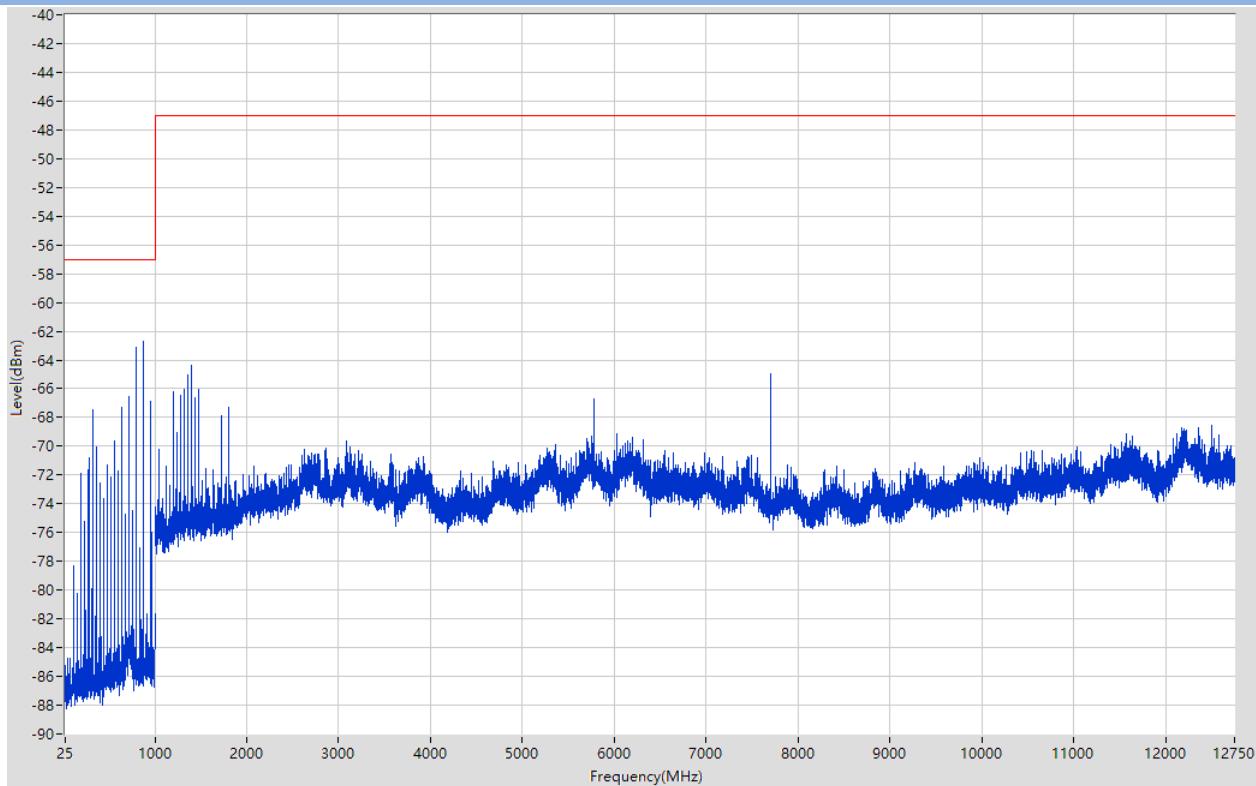
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.61	-57	N/A	1001
			RMS		-72.34		Pass	30000
1000	12750	1	Peak	1400.034	-63.85	-47	Pass	11750

802.11ac40 30 MHz to 12.75 GHz, High channel



Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	800.125	-62.48	-57	N/A	1001
			RMS		-72.29		Pass	30000
1000	12750	1	Peak	1400.034	-63.43	-47	Pass	11750

802.11ac80 30 MHz to 12.75 GHz, Middle channel



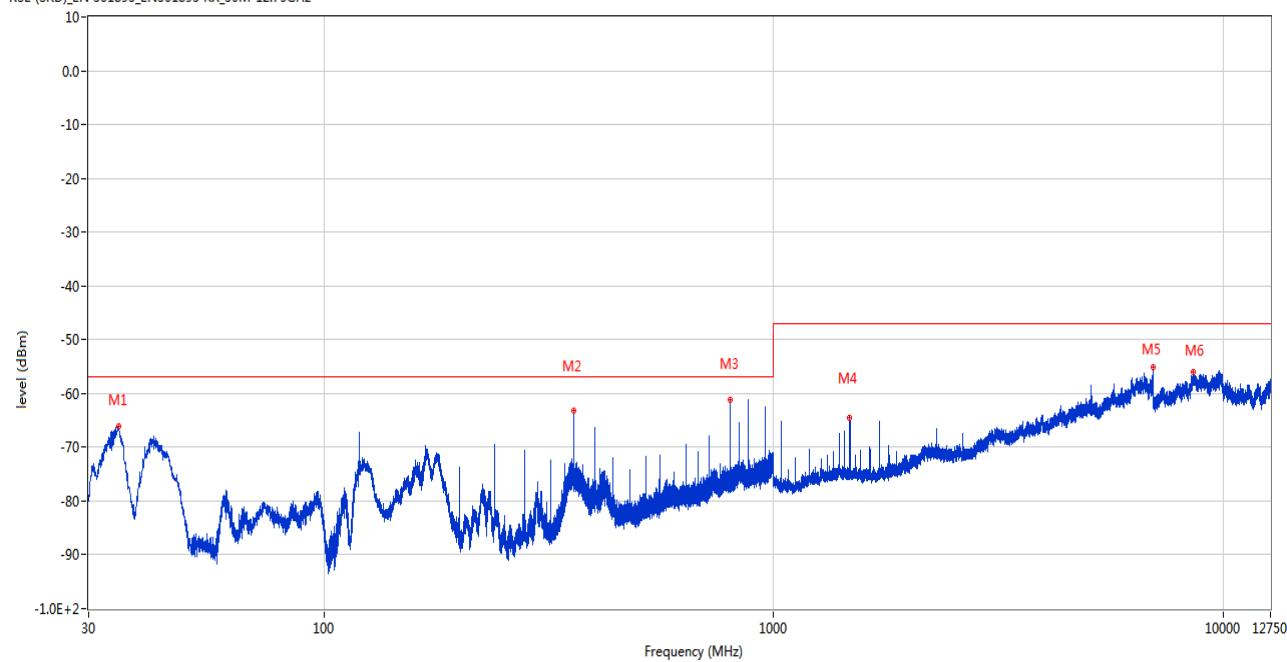
Start Frequency (MHz)	Stop Frequency (MHz)	RBW (MHz)	Detector	Frequency (MHz)	Power (dBm)	Limit (dBm)	Verdict	Sweep Point
25	1000	0.1	Peak	880.075	-62.68	-57	N/A	1001
			RMS		-67.54		Pass	30000
1000	12750	1	Peak	1400.034	-64.38	-47	Pass	11750

Note: The spurious above 12.75G is noise only, do not show on the report.

Cabinet Radiated Test Data

30 MHz to 12.75 GHz, ANT V

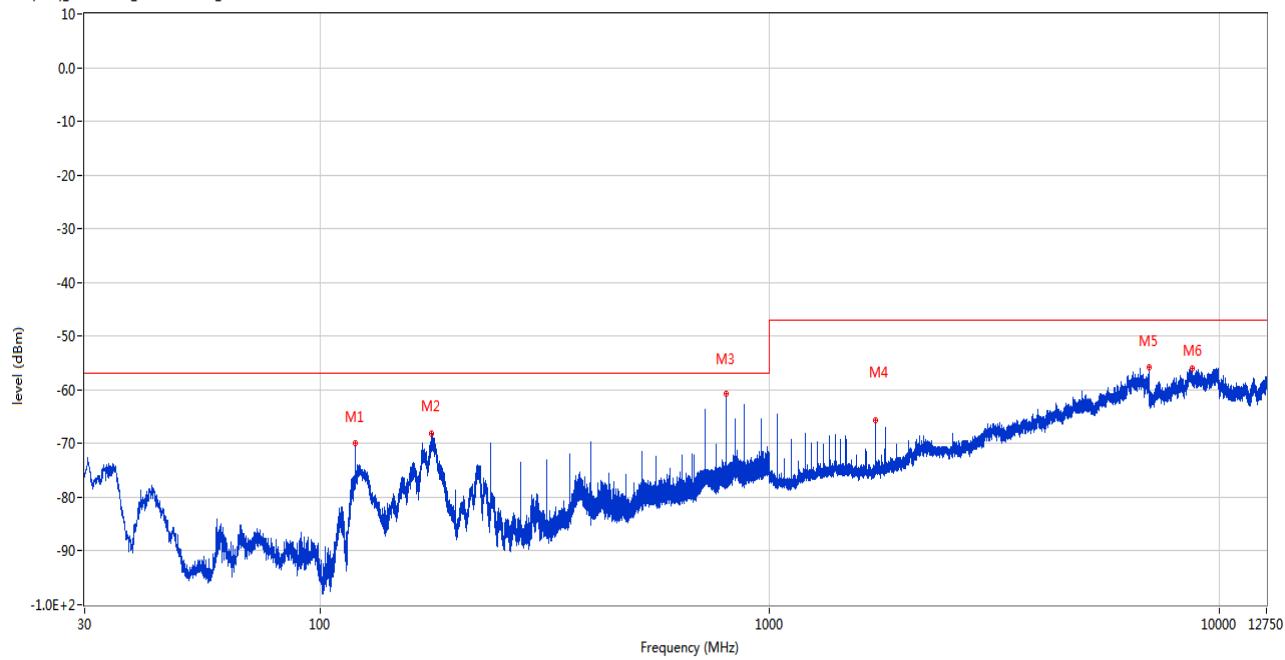
RSE (SRD)_EN 301893_EN301893 RX_30M-12.75GHz



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.947	-66.19	-18.62	-57.0	-9.19	13.00	Vertical	Horizontal	Pass
360.042	-63.30	-10.31	-57.0	-6.30	102.00	Vertical	Horizontal	Pass
800.034	-61.10	2.02	-57.0	-4.10	147.00	Vertical	Horizontal	Pass
1479.900	-64.58	-14.49	-47.0	-17.58	324.00	Vertical	Horizontal	Pass
6998.800	-55.20	5.92	-47.0	-8.20	250.00	Vertical	Horizontal	Pass
8587.000	-55.93	5.66	-47.0	-8.93	42.00	Vertical	Horizontal	Pass

30 MHz to 12.75 GHz, ANT H

RSE (SRD)_EN 301893_EN301893 RX_30M-12.75GHz



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
120.016	-69.93	-19.50	-57.0	-12.93	255.00	Horizontal	Horizontal	Pass
176.858	-68.22	-14.40	-57.0	-11.22	92.00	Horizontal	Horizontal	Pass
800.034	-60.68	2.02	-57.0	-3.68	261.00	Horizontal	Horizontal	Pass
1720.200	-65.57	-14.76	-47.0	-18.57	187.00	Horizontal	Horizontal	Pass
6993.400	-55.80	5.95	-47.0	-8.80	55.00	Horizontal	Horizontal	Pass
8701.425	-55.99	6.33	-47.0	-8.99	324.00	Horizontal	Horizontal	Pass

A.6 Adjacent channel selectivity

Test data

Note: The limit of receiver category 1 is not less than $-30\text{dBm} + k$, which k is $-20\log f - 10\log BW$, BW is mean channel bandwidth in MHz, f is the frequency in GHz.

Mode	Test Channel	Test Frequency (MHz)	Adjacent Channel (MHz)	Adjacent Channel Selectivity (dBm)	Limit (dBm)	Verdict
11a	Middle	5785	5765	-40.58	-58.26	Pass
			5805	-39.46		Pass
11ac20	Middle	5785	5765	-41.42	-58.26	Pass
			5805	-40.26		Pass
11ac40	Low	5755	5795	-41.68	-61.22	Pass
	High	5795	5755	-40.45	-61.28	Pass
11ac80	Middle	5775	5695	-41.65	-64.26	Pass
			5855	-39.97		Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ21C0720-AR.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ21C0720-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ21C0720-AI.PDF".

--END OF REPORT--